

JOURNAL OF BUSINESS AND EDUCATIONAL LEADERSHIP

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ECONOMIC VERSUS MORAL BASED PEDAGOGIES FOR BUSINESS ETHICS

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ABSTRACT: This study examines the impact of teaching accounting ethics from an altruistic versus economic perspective in a college classroom setting. Eighty accounting seniors were employed in a 2 x 2 full factorial “between subjects” experimental design with altruism and egoism set high and low. The results show that supplementing the AICPA Code of Professional Conduct with an economic perspective (ethical egoism) has a greater impact on altering student ethical perceptions than the application of traditional altruistic reasoning when evaluating complex ethical situations. Accordingly, ethical egoism may provide a more effective framework for teaching accounting ethics to business students.

INTRODUCTION

Accounting practitioners and educators are currently facing increased scrutiny regarding professional ethics. The past decade has seen numerous high profile failures by accountants and auditors which have been particularly costly to society. Enron, Adelphia, Global Crossing, WorldCom, Bernard Madoff, and Lehman Brothers are just a few examples of the dozens of major ethical fiascoes which have tarnished the profession. The widely publicized cases of ethical misconduct in accounting seem to have become the norm rather than the exception. Extensive ethical preparation is, however, a mandatory component of the curriculum at virtually every AACSB accredited college of business. Ethics are clearly being taught; yet, there appears to be a major malfunction with respect to the absorption of these ethical ideas by practicing accountants and auditors.

Business educators must accept some responsibility for the pervasive and continuous pattern of corporate corruption. Williams (2004) argues that the Positive Economic Science paradigm which is currently taught in the majority of business programs has significant drawbacks with respect to teaching moral values:

“When economic man is used as the framework for our textbooks, the context for our theories, the matter-of-fact description of how people behave, it is seldom prefaced with the disclaimer that it is merely an imaginary construct that allows for the doing of our mathematics. We run the grave risk that it is communicated as a moral value.”

William’s observation calls to question the pedagogical approach that academia takes when teaching business ethics. Is the self-interest based approach of economic man necessarily in conflict with proper moral and ethical values?

This study examines the effect of teaching accounting ethics from an altruistic approach versus the self-interest based approach of economic man (ethical egoism). Using a 2 x 2 full factorial “between subjects” experimental design the impact of teaching accounting ethics combined with altruism (high, low) and egoism (high, low) is examined in light of student perceptions of complex ethical cases.

ETHICAL CODES AND BEHAVIOR

Accounting ethics are largely based on the concept of altruism, which expresses a sincere concern for the welfare of others (Cheffers and Pakaluk, 2005). This is a core idea embedded in the AICPA Code of Professional Conduct as CPAs are required to place the interests of financial statement users and society above their own. In the absence of these values, auditor independence would be severely compromised along with the credibility of audited financial statements. Accountants in private practice are also required to adhere to altruistic ideals if they are employed by large, publicly traded companies through the provisions of the Sarbanes-Oxley Act of 2002 and International Standard on Quality Control No. 1. Accordingly, a significant portion of practicing accountants are required by law to behave in an ethical manner. Their employment can be legally terminated for ethical breaches, and they face the possibility of civil and criminal penalties for severe violations (Arens, et al., 2009).

Business ethical violations – or worse yet fraud – generally occur when self-interest is placed above the obligation to serve the needs of identified stakeholders. Under the view of "economic man," deliberate ethical violations can be perceived as rational as people are assumed to behave in a manner that maximizes their expected utility (Savage, 1954). In these situations the perceived value of serving others is subordinate to self-interest. Yet, how are these ethical norms taught in business schools? College textbooks in accounting invariably cover ethical content in terms of the Rules of Conduct, and they discuss the potential legal and economic consequences for violations, but they rarely delve into presenting the psychological motivations that lead people to choose unethical behavior. Descriptive theories, such as Cressey's Fraud Triangle may provide some understanding of why people behave unethically, but they fail to shape student values in terms of why *they* should behave in an ethical manner (Cressey, 1973). Self-interest is unavoidable, and it needs to be taken into account when presenting ethical guidelines to students.

The philosophy of acting in one's own self-interest is called ethical egoism or simply egoism (Sanders, 1988). At first glance the concept of egoism appears completely opposite to traditional ethical values; people who pursue their own self-interest can only achieve this at the expense of others. This is not necessarily true as the short-term advantages of unethical behavior may be more than offset by the long-term consequences. Considering this argument, a rational person pursuing egoism would have to balance short-term and long-term consequences in making a decision about the nature of their own self-interest

(Rachels, 2008). Moreover, the rational egoist would recognize that performing actions that benefit others would be in their own long-term best interest in most business situations.

There is still a rather obvious disadvantage to rational egoism in that performing actions that benefit others is incidental rather than intentional. Egoism advocates selfishness, which is contrary to the spirit and values of accounting professional codes of ethics. Thus, from a business educational perspective, egoism alone cannot be openly advocated as a justifiable position because the interests of others will be sacrificed when self-interest needs are perceived to be greater than following the altruistic ideals of the professional codes of conduct. For example, if the individual egoist places greater value on short-term gratification than long-term success, then virtually anything becomes justifiable including outright fraud.

A necessary condition for advocating egoism in a business curriculum would involve convincing students that truly rational behavior always involves pursuing their long-term self-interest, even if short-term sacrifices are necessary to achieve this. In this situation, the final actions of the rational egoist would be close to – but not identical to – the prescribed professional codes of conduct for accountants and business executives. Yet, even here, critics would point out that we are pursuing an unjustifiable means (advocating selfishness) to achieve the desired end of correct ethical behavior. There is also the issue of major ethical malfunctions when the egoist erroneously believes that unethical behavior on their part will result in the long-term attainment of their desired goals. Accordingly, educators would have to package egoism in a modified form which advocates the position that ethical behavior is so consistently beneficial to long-term objectives that it should be pursued in all but the most unusual circumstances. The relevant question concerns whether or not ethical egoism can be a rational component of a business student's ethical preparation, and that is the focus of this study.

Prior research has demonstrated mixed results regarding the impact of ethical codes on behavior. Some studies show that a mere awareness of ethical codes has no significant impact on ethical decision-making (Laczniak and Inderrieden, 1987; White and Dooley, 1993; and Cleek and Leonard 1998), while other studies note a positive impact (Barnett and Vaicys, 2000; and Pflugrath, et al., 2007). The current authors are, however, unaware of any studies that evaluate the ethical philosophies of altruism versus egoism in the context of their impact on ethical judgments in business settings.

HYPOTHESIS DEVELOPMENT

Professional codes of conduct must be taught as part of the curriculum in any accounting educational program. The philosophical orientation of how these codes are presented and explained is largely a matter of pedagogical taste. As discussed previously, ethical altruism is not necessarily incompatible with ethical egoism, and the two philosophies can be merged into a single viewpoint. As discussed above, prior research is unclear as to whether the awareness of ethical

codes has a significant impact on ethical decision-making; and, the philosophical presentation of the codes is also open to question. The following hypotheses are developed:

- H1: Presenting the AICPA Code of Professional Conduct combined with ethical altruism does not alter student ethical judgments or examination performance compared to presenting the Code alone.
- H2: Presenting the AICPA Code of Professional Conduct combined with ethical egoism does not alter student ethical judgments or examination performance compared to presenting the Code alone.
- H3: Presenting the AICPA Code of Professional Conduct combined with ethical altruism and egoism does not alter student ethical judgments or examination performance compared to presenting the Code alone.

METHODOLOGY

The above hypotheses are tested using a 2x2 full factorial, between subjects research design using 80 accounting seniors from a Midwestern, AACSB accredited college of business. Four separate sections of the same upper division accounting class were selected to participate in the study. Students were unaware that the lectures and presentation of material would be slightly different between these sections, and they registered according to their own needs in terms of scheduling. Ideally, it would have been desirable to randomly assign students to each of the four sections to eliminate any possible student-selection bias; however, this was not practical. Still, the authors are unaware of any *a priori* reason for a systematic selection bias based on normal student scheduling needs. Random assignment was used to determine which sections received which set of lectures. The experiment was conducted as part of the college's educational assessment program and the results are being used to evaluate the professional ethics learning goal for accounting majors.

Any students who had previously taken the course were removed from the study so that each participant was viewing the lecture and presentation for the first time. Demographic information was collected from the students via academic transcripts and included: age, gender, and grade point average. Students were matched across the four sections by approximate age and gender. The dichotomous grouping variable for age was 25 years old. Matching on grade point average was not practical as there were significant differences between classes. Accordingly, the factorial analysis was performed using the General Linear Model with grade point average as a covariate (ANCOVA). The final experimental grouping yielded four sections of 20 students with 10 males and 10 females in each section.

Each experimental group received the same factual presentation of the AICPA code of professional conduct as part of the normal course requirement. Three of the four groups, however, had the following supplemental discussions seamlessly incorporated into the lecture:

- Section 2: Ethical Altruism only.
- Section 3: Ethical Egoism only.

Section 4: Ethical Altruism and Egoism.

There was no discussion of altruism or egoism in Section 1. The philosophical discussions of altruism and egoism were stripped of academic jargon and presented to the students as persuasive arguments. Altruism was discussed as a moral obligation for the accounting profession to perform in a manner that benefits society (Cheffers and Pakaluc, 2005). Egoism was presented along the lines of showing that unethical behavior invariably results in unfavorable complications and possibly dire legal consequences in the long-run, and that self-interest is best served by behaving in an ethical manner (Chong, 1992).

RESEARCH INSTRUMENT

Each student was required to prepare a written report that evaluated the ethical conduct of auditor and client personnel for the following cases of major audit failure: Lincoln Savings and Loan Association; Jamaica Water Properties; and OAO Gazprom (Knapp, 2010). These cases were selected because they provide a broad range of auditor and client characters with varying degrees of ethical conduct. Moreover, the ethical conduct of many of the characters fell in a gray zone where there could be genuine disagreement about the magnitude of ethical misbehavior. Aside from a narrative evaluation of each auditor and client character described in the case, each student also ranked their ethical conduct on a Likert scale: 5 = highly ethical, no ethics violations at all; 4 = mostly ethical, but some minor ethical misjudgments; 3 = trying to be ethical, but some clear ethical blunders; 2 = mostly unethical, pursuing self-interest above the rights of others; and 1 = completely unethical, places self-interest above the rights of others. This was a graded assignment and students were required to justify their rankings in their reports.

INDEPENDENT AND DEPENDENT VARIABLES

The two independent variables evaluated in this study are the application of altruism and egoism to the AICPA Code of Professional Conduct. Four separate dependent variables are evaluated.

1. Student performance on a multiple-choice ethics examination which tests the factual knowledge of the AICPA Code of Professional Conduct.
2. Student performance on a multiple-choice auditing examination which does not cover ethics (for comparative purposes only).
3. Student evaluation of auditor ethics on the five point Likert scale described previously for each of the three cases (mean level of conduct for each case).
4. Student evaluation of client ethics on the five point Likert scale described previously for each of the three cases (mean level of conduct for each case).

Factorial ANCOVA (General Linear Model) is used to evaluate the effect of the two independent variables on each of the four dependent variables with GPA as a covariate, and gender and age as factors.

RESULTS

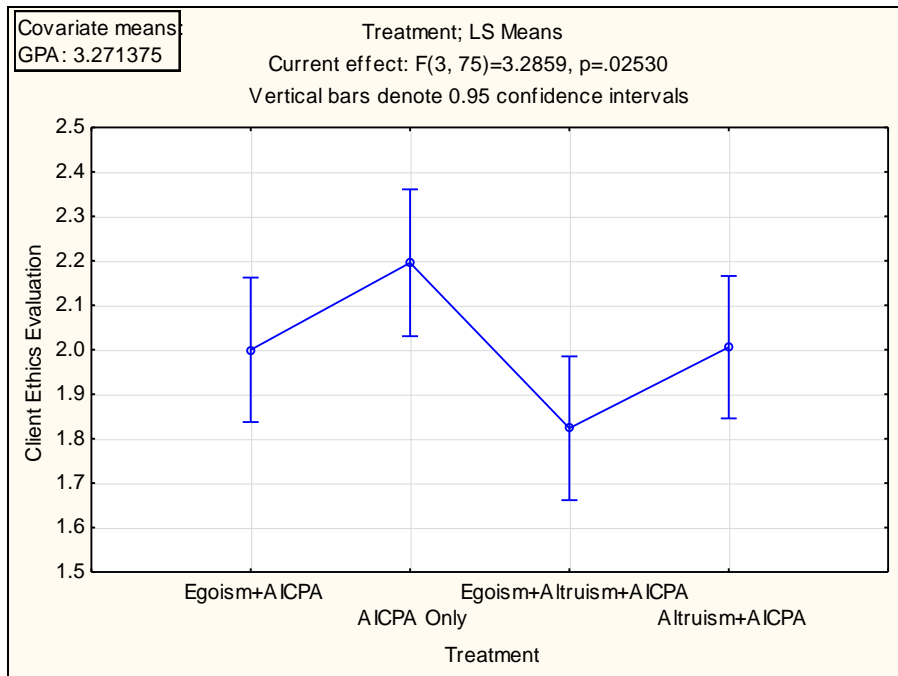
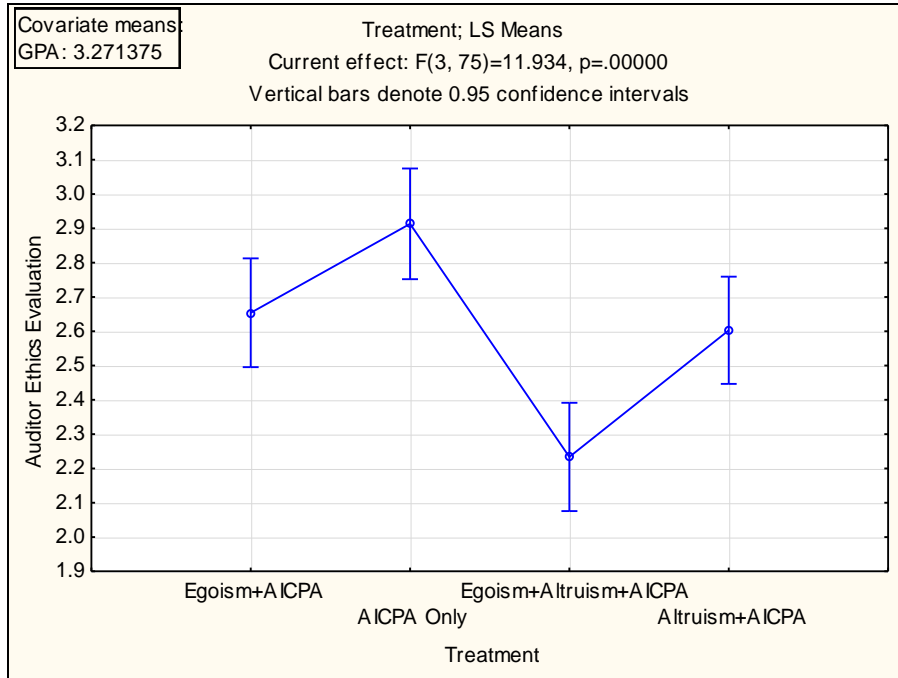
Table 1 shows a Pearson correlation matrix with p-values for the dependent and demographic factor variables. As expected, examination performance on ethics questions is highly correlated with performance on non-ethics questions ($r = .9473$) as well as student grade point average. Since the cases involve questionable conduct by both auditor and client personnel, there is also a significant positive correlation between the evaluation of auditor and client ethics ($r = .4847$). Student age also appears to be a significant factor as students above 25 years tend to have significantly higher GPAs and ethical evaluations of auditor and client personnel.

Table 1
Correlation Matrix of Factors and Dependent Variables

Variable	Correlation Matrix with p-values Marked correlations are significant at $p < .05000$					
	Age	Gender	GPA	Ethics Exam Score	Non-Ethics Exam Score	Auditor Ethics Evaluation
Gender	.1270 p=.262					
GPA	.2371 p=.034	-.1268 p=.263				
Ethics Exam Score	.1858 p=.099	-.1196 p=.291	.5857 p=.000			
Non-Ethics Exam Score	.2208 p=.049	-.1038 p=.359	.5980 p=.000	.9473 p=0.00		
Auditor Ethics Evaluation	.4952 p=.000	.1413 p=.211	.1270 p=.261	.0234 p=.837	.0762 p=.502	
Client Ethics Evaluation	.6267 p=.000	.1932 p=.086	.1448 p=.200	.1181 p=.297	.1270 p=.262	.4847 p=.000

Figure 1 shows a comparison of least square means using the General Linear Model for each combination of independent variables. The vertical bars are 95% Fisher confidence intervals around each mean. Complete factorial ANCOVA tables for each of the four dependent variables are presented below Figure 1. The data indicates that the combination of egoism and altruism produce significantly lower ethical evaluations of auditor conduct for the examine case studies. This implies that students were more critical of auditor ethical conduct when altruistic and self-interest arguments are presented together. There is a similar overall pattern when considering client ethics, except the effect isn't quite as pronounced. Presenting the AICPA code alone resulted in ethical evaluations that were least critical in both the auditor and client evaluations.

Figure 1
ANCOVA Means for Auditor versus Client Ethical Evaluation



ANCOVA on Auditor Ethics Evaluation

Effect	Factorial ANCOVA with GPA as a Covariate				
	SS	Degr. of Freedom	MS	F	p
Intercept	9.075134	1	9.0751	92.5054	0.0000
GPA	0.183527	1	0.1835	1.8707	0.1762
Egoism	2.028387	1	2.0284	20.6759	0.0000
Altruism	1.105214	1	1.1052	11.2658	0.0013
Age	1.659664	1	1.6597	16.9174	0.0001
Gender	0.066338	1	0.0663	0.6762	0.4140
Egoism*Altruism	0.022257	1	0.0223	0.2269	0.6355
Egoism*Age	0.118296	1	0.1183	1.2058	0.2763
Altruism*Age	0.023177	1	0.0232	0.2362	0.6286
Egoism*Gender	0.125713	1	0.1257	1.2814	0.2619
Altruism*Gender	0.060822	1	0.0608	0.6200	0.4340
Age*Gender	0.030367	1	0.0304	0.3095	0.5799
Egoism*Altruism*Age	0.096092	1	0.0961	0.9795	0.3261
Egoism*Altruism*Gender	0.029682	1	0.0297	0.3026	0.5842
Egoism*Age*Gender	0.309666	1	0.3097	3.1565	0.0805
Altruism*Age*Gender	0.006927	1	0.0069	0.0706	0.7913
Egoism*Altruism*Age*Gender	0.059545	1	0.0595	0.6070	0.4389
Error	6.180541	63	0.0981		

ANCOVA on Client Ethics Evaluation

Effect	Factorial ANCOVA with GPA as a Covariate				
	SS	Degr. of Freedom	MS	F	p
Intercept	5.354233	1	5.3542	74.4344	0.0000
GPA	0.128301	1	0.1283	1.7836	0.1865
Egoism	0.684663	1	0.6847	9.5182	0.0030
Altruism	0.053051	1	0.0531	0.7375	0.3937
Age	2.906048	1	2.9060	40.3998	0.0000
Gender	0.023197	1	0.0232	0.3225	0.5721
Egoism*Altruism	0.000368	1	0.0004	0.0051	0.9432
Egoism*Age	0.442993	1	0.4430	6.1585	0.0158
Altruism*Age	0.031001	1	0.0310	0.4310	0.5139
Egoism*Gender	0.049916	1	0.0499	0.6939	0.4080
Altruism*Gender	0.120824	1	0.1208	1.6797	0.1997
Age*Gender	0.063007	1	0.0630	0.8759	0.3529
Egoism*Altruism*Age	0.021473	1	0.0215	0.2985	0.5867
Egoism*Altruism*Gender	0.397026	1	0.3970	5.5194	0.0220
Egoism*Age*Gender	0.169603	1	0.1696	2.3578	0.1297
Altruism*Age*Gender	0.064433	1	0.0644	0.8957	0.3475
Egoism*Altruism*Age*Gender	0.000294	1	0.0003	0.0041	0.9492
Error	4.531729	63	0.0719		

ANCOVA on Ethics Examination Scores

Effect	Factorial ANCOVA with GPA as a Covariate				
	SS	Degr. of Freedom	MS	F	p
Intercept	33.2772	1	33.2772	3.0821	0.0840
GPA	280.2910	1	280.2910	25.9600	0.0000
Egoism	4.8953	1	4.8953	0.4534	0.5032
Altruism	14.8294	1	14.8294	1.3735	0.2456
Age	16.6052	1	16.6052	1.5379	0.2195
Gender	4.3702	1	4.3702	0.4048	0.5269
Egoism*Altruism	14.5443	1	14.5443	1.3471	0.2502
Egoism*Age	2.4231	1	2.4231	0.2244	0.6373
Altruism*Age	35.7915	1	35.7915	3.3149	0.0734
Egoism*Gender	0.6734	1	0.6734	0.0624	0.8036
Altruism*Gender	0.0426	1	0.0426	0.0039	0.9501
Age*Gender	0.9461	1	0.9461	0.0876	0.7682
Egoism*Altruism*Age	2.5320	1	2.5320	0.2345	0.6299
Egoism*Altruism*Gender	3.0192	1	3.0192	0.2796	0.5988
Egoism*Age*Gender	10.6662	1	10.6662	0.9879	0.3241
Altruism*Age*Gender	0.0527	1	0.0527	0.0049	0.9445
Egoism*Altruism*Age*Gender	3.4808	1	3.4808	0.3224	0.5722
Error	680.2134	63	10.7970		

ANCOVA on Non-Ethics Examination Scores

Effect	Factorial ANCOVA with GPA as a Covariate				
	SS	Degr. of Freedom	MS	F	p
Intercept	186.126	1	186.1261	4.5520	0.0368
GPA	1264.206	1	1264.2057	30.9180	0.0000
Egoism	37.293	1	37.2932	0.9121	0.3432
Altruism	16.754	1	16.7537	0.4097	0.5244
Age	78.798	1	78.7981	1.9271	0.1700
Gender	12.111	1	12.1112	0.2962	0.5882
Egoism*Altruism	44.547	1	44.5472	1.0895	0.3006
Egoism*Age	27.825	1	27.8251	0.6805	0.4125
Altruism*Age	164.852	1	164.8519	4.0317	0.0489
Egoism*Gender	9.950	1	9.9502	0.2433	0.6235
Altruism*Gender	12.584	1	12.5841	0.3078	0.5810
Age*Gender	0.347	1	0.3468	0.0085	0.9269
Egoism*Altruism*Age	20.811	1	20.8106	0.5090	0.4782
Egoism*Altruism*Gender	18.981	1	18.9810	0.4642	0.4982
Egoism*Age*Gender	91.448	1	91.4477	2.2365	0.1398
Altruism*Age*Gender	2.374	1	2.3742	0.0581	0.8104
Egoism*Altruism*Age*Gender	14.971	1	14.9710	0.3661	0.5473
Error	2576.003	63	40.8889		

When examining the effect of the experimental treatments on ethics exam and non-ethics exam scores, the factorial ANCOVA tables show no significant effects for egoism or altruism. This result is consistent with White and Dooley (1993) as well as several other studies which show that a mere factual knowledge of ethical codes has no significant impact on student performance or behavior in evaluating ethical situations. In the current study, the fact that students performed in a similar manner on ethical and non-ethical examination questions seems to indicate that learning the factual content of ethical codes does not shape student ethical values or beliefs. In effect, the ethical codes are simply recited in terms of conformity or nonconformity.

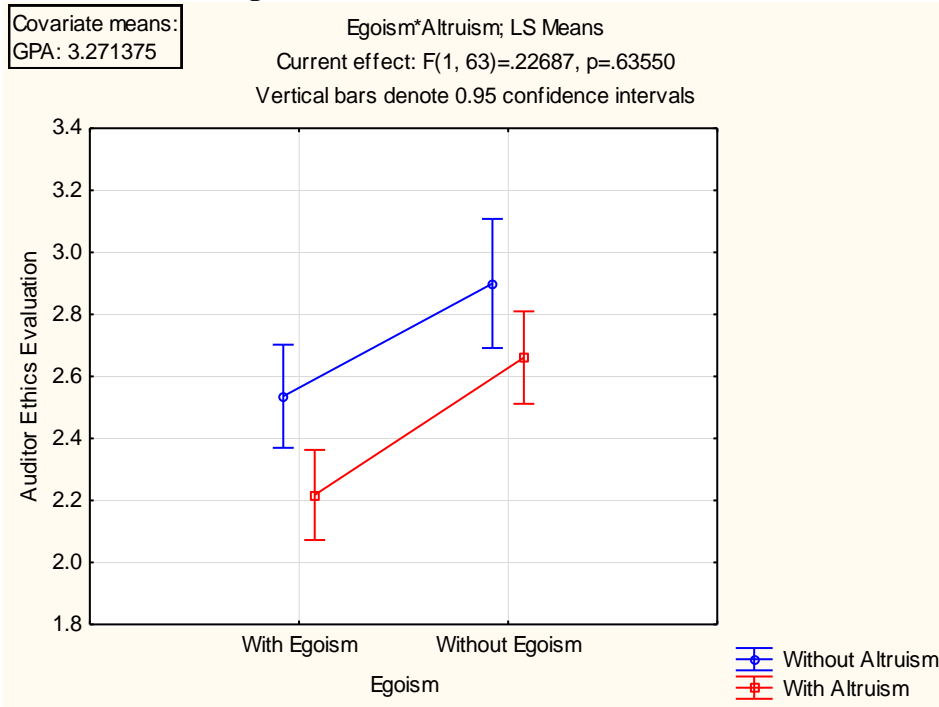
The factorial ANCOVA tables show p-values of less than .0001 for egoism and .0013 for altruism respectively when measuring student evaluations of auditor ethics. However, the altruism effect for client ethics was not significant ($p = .3937$). This seems to indicate that, overall, ethical egoism has a greater impact on student ethical evaluations than the traditional altruistic philosophy. It is interesting to note that there was little statistical interaction between egoism and altruism (see Figure 2) in either the auditor or client evaluations – the results appear additive, where one effect is simply added to the other. This is not surprising because altruism and egoism are generally viewed as conflicting philosophies. Accordingly, students with inherently stronger moral values would respond more favorably to altruistic arguments, while students with weaker moral values may respond more favorably to egoism. The end result is still the same: less favorable evaluations of ethical behavior for both auditor and client.

The ANCOVA tables seem to indicate that egoism is slightly more effective than altruism in altering student perceptions of ethical misconduct for both auditor and client personnel. This provides an interesting slant on ethical pedagogy which warmly embraces altruism and chastises naked self-interest. In effect, egoism in this particular context is painting unethical behavior as foolish from an economic perspective. This may be a more effective argument for advocating ethical behavior than traditional morality and altruism.

SUMMARY AND CONCLUSIONS

There is considerable evidence – experimental and anecdotal – that teaching professional codes of conduct to accounting students does not, in itself, alter student perceptions of ethical behavior, or the likelihood that they will engage in such behavior when they become practicing accountants. The current study provides evidence that supplementing the AICPA Code of Professional Conduct with altruistic arguments does alter student perceptions of ethical behavior in a classroom setting. More importantly, supplementing the Code with ethical egoism can have an even more pronounced impact on judgment. The combining of altruistic arguments with egoism is clearly possible and produces interesting results in terms of increasing student perceptions of what constitutes unethical behavior.

Figure 2
Egoism and Altruism Interaction Effects



Altruism portrays unethical behavior as morally wrong; egoism portrays unethical behavior as foolish when viewed from a long-term perspective. Both arguments may resonate differently with students according to their innate level of morality; however, the advantages of providing both perspectives when teaching accounting ethics should at least be considered. Undoubtedly some educational institutions will reject ethical egoism because of its amoral overtones. The traditional morality of right and wrong is intellectually and emotionally appealing. Ethical egoism, on the other hand, may be justified intellectually in terms of producing a desirable end result, but it cannot be justified with traditional morality.

The strongest argument in favor of exploring egoism as a means of teaching professional ethics is that the status quo has not worked. Every business school teaches professional ethics; yet, serious ethical violations occur on a routine basis throughout all levels of business and government. Is there a more promising alternative for altering ethical behavior? Naturally, further research is needed to confirm the impact of the egoistic philosophy on perceptions of ethical behavior. Replications of the current study with larger sample sizes are warranted.

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CREATING ONLINE BRAND VALUE THROUGH ONLINE DISCUSSION SITES

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ABSTRACT: This paper discusses the implications of the new evolving Service-Dominant (S-D) logic in marketing on brand value creation. Furthermore, it introduces the concept of online brand value and examines whether online discussion sites constitute a means for firms to co-create, together with a firm's customers, online brand value. Moreover, a conceptual framework of online discussion sites is proposed. Finally, the results of an exploratory empirical analysis of two discussion sites are presented. The findings provide initial support for the hypothesis that online discussion sites can be used to create online brand value. Moreover, the findings suggest that firm-generated discussion sites are better suited for online brand value co-creation activities than third-party generated discussion sites.

INTRODUCTION

Firms are increasingly recognizing that brands are among their most valuable assets and are, therefore, intensifying the level of resources directed toward building them (Madden, Fehle, and Fournier 2006; Simon and Sullivan 1993). Prior research on brand value creation has primarily focused on investigating brand value against the background of a goods-dominant logic (Vargo and Lusch 2004). However, Merz, He, and Vargo (2009) posit that branding is evolving toward a new brand logic, which brings with it a new understanding of brand value creation and which is reflected in the evolving service-dominant (S-D) logic in marketing (Vargo and Lusch 2004). Consequently, the question arises what implications the S-D logic has on brand value creation.

Besides taking a goods-dominant logic perspective on brand value creation, prior research has also predominantly focused on examining brand value creation in an *offline* context, despite the widespread observation that branding in an online context becomes even more important (e.g., Clauser 2001; Kotha, Rajgopal, and Rindova 2001) and that firms do not have a good understanding of how to build brand value online (Christodoulides et al. 2006). Because the online environment is significantly different from the offline environment (Alwi and Da Silva 2007; Hoffman and Novak 1996), a better understanding of how firms can build brand value in the online environment is needed (Christodoulides and de Chernatony 2004; Merrilees and Fry 2002).

Given the importance of the new brand logic and the lack of understanding of how firms can build brand value in the online environment, this paper examines how one interactive online tool can help firms co-create online brand value. Specifically, we investigate how *online discussion sites* can help firms co-create online brand value. The purpose of this paper is fourfold: First, we examine the implications of the evolving S-D logic on brand value creation. Second, we introduce the concept of *online brand value*. Third, we develop a *typology of online discussion sites* and put forward hypotheses regarding the relationship between online discussion site type and online brand value. Fourth, we conduct an empirical analysis to test our hypotheses.

THE EVOLVING SERVICE-DOMINANT LOGIC IN MARKETING

Formal academic marketing inherited its foundation from neo-classical economic theory at the beginning of the twentieth century (Vargo and Morgan 2005). Not surprisingly, therefore, it was built on a goods- and manufacturing-based model of economic exchange, which Vargo and Lusch (2004) called a “goods-dominant” (G-D) logic. G-D logic views units of output, embedded with value in the production process, as the central unit of exchange. Specifically, it suggests that firms create value, embed that value into goods, and then sell their goods to customers through discrete transactions. A G-D logic, therefore, views customers as exogenous to the value creation process and thus as operand resources. Operand resources are resources on which an operation or act is performed to produce benefit (e.g., for the producing firm; Constantin and Lusch 1994). As a result, G-D logic emphasizes discrete transactions and customer acquisition.

In line with calls from other researchers, Vargo and Lusch (2004) argued that the G-D logic perspective is limited as it does not fully take into consideration the increasing importance of services. In recognition of the limitations of G-D logic, Vargo and Lusch (2004) therefore proposed a new service-based model of *all* exchange which they named service-dominant (S-D) logic. Specifically, the authors suggest that marketing is evolving toward a new dominant logic, which is more service-centered and customer-oriented. This S-D logic suggests that people exchange service for service. The authors define service “as the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself” (p. 2). Therefore, people exchange to acquire the benefits of applied specialized operand resources (knowledge and skills). In contrast to operand resources, operand resources are capable of causing benefit by directly acting on other resources, either operand or operant, to create benefit (Constantin and Lusch 1994). As a result, S-D logic views tangible goods as embodied knowledge or activities. Tangible goods, therefore, solely constitute the distribution mechanism for service provision.

Whereas a G-D logic perspective views the “producer” and “consumer” as separate parties in the exchange process, an S-D logic perspective views the

consumer as a co-creator (operant resource), rather than a target (operand resource). Moreover, a service-centered view is process oriented, that is, value is only created interactively. Consequently, it embraces a process-oriented logic (marketing *with*) that emphasizes value-in-use in contrast to the traditional output-oriented models (marketing *to*) that argue that value is determined through value-in-exchange. S-D logic, therefore, acknowledges that value is not embedded in the physical goods but rather co-created through (perceived) consumption and usage and always determined by the beneficiary. This implies that exchange is relational (Grönroos 1994; Gummesson 1998) and that firms cannot deliver value but only make value propositions (see also Merz, Czerwinski, and Amblee 2009).

IMPLICATIONS OF THE S-D LOGIC IN MARKETING ON BRAND VALUE CREATION

Just as Vargo and Lusch (2004) have argued that marketing is evolving toward a new logic, so have Merz, He, and Vargo (2009) argued that branding is evolving toward a new brand logic. The authors map the evolution of the branding literature and organize it into brand eras to delineate the various conceptualizations of brand. They find that branding has shifted from the conceptualization of brand as a firm-provided property of goods to brand as a collaborative, value co-creation activity of firms and all of their stakeholders, in line with the evolving S-D logic in marketing.

Specifically, Merz et al. (2009) identify four brand eras. The first brand era is the *Individual Goods-Focus Brand Era* (1900s–1930s), in which customers and brands constitute operand resources. Brand value is embedded in the physical good and created when goods are sold (output orientation). Brand value is determined through value-in-exchange (e.g., Low and Fullerton 1994). Overall, therefore, this brand era took a G-D logic perspective to branding.

The *Value-Focus Brand Era* (1930s–1990s) constitutes the next brand era in Merz et al.'s (2009) conceptualization. In this brand era, brands begin to be viewed as operant resources and hence were seen as being able to stand on their own (instead of solely adding value to any market offering when exchanged in the marketplace). However, brand value was still being viewed as determined through value-in-exchange. Overall, while still mostly G-D, this brand era began to evolve toward a more S-D logic view of brands and branding (e.g., Levy 1959; Park et al. 1986).

The third brand era is the *Relationships-Focus Brand Era* (1990s–2000s). In this brand era, the branding literature examined in more detail the customer-firm (Aaker 1991; Kapferer 1992; Keller 1993), the customer-brand (Aaker 1997; Fournier 1998), and the firm-brand (Berry 2000; de Chernatony 1999) relationships. Collectively, the different research streams led to the insights that internal (e.g., employees) and external (e.g., consumers) customers constitute operant resources and hence brand value co-creators. Furthermore, in this brand era scholars acknowledged that brand value is determined through customers' perceived value-in-use and that it is relational (process orientation), that is, that it

is co-created through affective *dyadic* relationships that customers form with their brands. Consequently, this brand era took a predominantly S-D logic perspective to branding.

The final brand era identified by the authors is the *Stakeholder-Focus Brand Era* (2005 and forward). In this brand era, brand scholars acknowledged that *all* stakeholders form *network* relationships with brands and interact socially with other stakeholders. Consequently, this brand era acknowledged that all stakeholders constitute *operant* resources and hence co-create brand value (e.g., Ballantyne and Aitken 2007; McAlexander et al. 2002; Muniz et al. 2005). This brand era fully reflects the essence of the S-D logic in marketing.

Overall, therefore, in line with the S-D logic in marketing, Merz et al. (2009) demonstrate that brand scholars have shifted their focus over the past several decades from viewing a brand as an identifier to viewing it as a dynamic and social process. Thus, the branding literature shifted from an output orientation (i.e., brand value is embedded in the physical goods and determined through value-in-exchange) to a process orientation (i.e., brand value is co-created with all stakeholders and determined through all stakeholders' collectively perceived value-in-use). Furthermore, it shifted from viewing internal and external customers as exogenous to the brand value creation process to viewing them as endogenous. Finally, the branding literature shifted from viewing brands as operand resources and directly connected to the market offering to viewing brands as operant resources that exist independently from the market offering. As mentioned, this shift in the branding literature mirrors the shift that has taken place in the marketing literature in general – the shift toward a more S-D logic.

Consequently, the new brand logic and the S-D logic in marketing have the following implications for the brand value creation process: (1) brand value creation is relational (process orientation), (2) customers are always co-creators of brand value, and (3) brand value is always determined through customers' perceived value-in-use. As a result, firms need to take this new brand logic into consideration when creating their (online and offline) brand value(s). In the following section, we introduce the concept of *online brand value*.

ONLINE BRAND VALUE

In line with the new brand logic, we define brand value as a brand's perceived use value to all customer constituents. Similarly, we define *online brand value* as a brand's perceived use value to all online customer constituents, that is, to all Internet users. Our definition of online brand value highlights that we distinguish between offline and online brands and between brand value creation activities targeted toward building a firm's offline and online brand. Given that brands exist that are strong in the offline (e.g., Coca-Cola, McDonald's), online (e.g., Google, eBay), or both (e.g., Cisco, Dell) worlds, we believe that any marketing activity targeted toward building online brand value should complement, rather than substitute, the activities targeted toward building offline brand value.

Prior research has highlighted the need for the *online brand value* concept as the online equivalent to offline brand value. Kotha et al. (2001) argued that building brand value is a key determinant of competitive success for Internet firms. Similarly, de Chernatony (2001) argued that the Internet's unique characteristics have implications for developing and managing brands. Furthermore, Christodoulides et al. (2006) emphasized that "brand" is a universal concept regardless of setting but that the ways in which brand value is created are different in an online than offline context. Ind and Riondino (2008) argue that the web has changed everything for brands. As a result, many researchers have highlighted the importance of online brands and branding in the online context. Despite this acknowledgement, however, surprisingly little research exists that helps managers understand how to build a strong online brand, that is, how to build *online brand value*.

The few studies that investigate brand value creation in the online context are mainly of conceptual nature. For example, Page and Lepkowska-White (2002) introduced the concept of *web equity* and developed a framework for building consumer value in Internet companies. Specifically, they drew upon Keller's (1993) customer-based brand value concept and identified factors that drive web equity through awareness and image. Kim et al. (2002) also built upon Keller's brand value conceptualization and put forward a conceptual framework to help firms build brand equity online. These authors argue that firms should increase awareness (i.e., search engines, web advertising, online word-of-mouth, cross promotion) or brand knowledge (i.e., website, trust) to build their web equity. Nandan (2005) built upon these studies and proposed the concept of *web brand franchise* to help firms manage successful online brands.

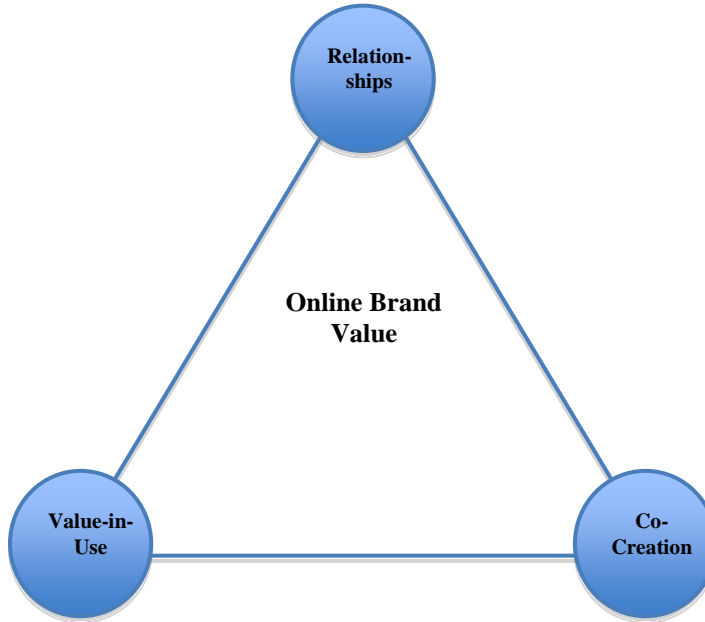
CREATING ONLINE BRAND VALUE THROUGH ONLINE DISCUSSION SITES

As mentioned, the S-D logic suggests that brand value is relational and that customers are always co-creators of brand value. Furthermore, it suggests that brand value is always determined through customers' perceived value-in-use. We contend that online discussion sites are useful means for companies to create online brand value due to their peculiar characteristics.

To illustrate, online discussion sites draw together people with similar interests. They present an opportunity for participants to share their experience, knowledge, and opinions on a specific topic with others (Fong and Burton 2006). Discussion boards cover diverse topics from automobiles to movies, sports teams, and the latest iPhone applications. Customers are likely to actively engage in discussion sites only if they perceive a site to have *value-in-use*. Furthermore, because they actively post their experience, knowledge, and opinions, customers also *co-create* the content of such sites and hence their brand value. Moreover, the more content is provided on discussion sites, the more valuable they are to customers. In turn, the more valuable the discussion sites for customers, the more likely they return to that site regularly. Hence, successful discussion sites are also

relational. Thus, against the background of the new brand logic, discussion sites seem to constitute valuable means to co-create online brand value (see Figure 1).

Figure 1: Creating Online Brand Value Through Co-Creation, Relationships, and Perceived Value-in-Use



Previous research on discussion sites has found that discussion boards are credible information sources for participants (Bickart and Schindler 2001) and thereby have a significant influence on participants' decision-making (Kozinet 1999; Nelson and Otnes 2005). Fong and Burton (2006) emphasize this by highlighting that consumers are increasingly turning to computer-mediated communication for information to use in their decision-making process. Hagel and Armstrong (1997) suggest that virtual communities (e.g., discussion sites) provide consumers with the ability to develop relationships, co-create content, exchange information, and buy and sell products.

Nelson and Otnes (2005) examined the role of virtual communities in planning weddings. The authors found that brides used discussion boards to solicit advice, opinions, and information, as well as gain marketing-related information, recommend websites, and share stories (Fong and Burton 2006). These results support Kozinet's (1999) finding that discussion boards have wide exposure and influence because participants who share a similar interest peruse them frequently. In support of this view, Bickart and Schindler (2001) suggest that this sort of information source may have greater credibility than marketer-generated information as the personal opinion and account of a participant who has experienced a product is judged to be a trustworthy source because the participant is a fellow consumer, perceived to have no vested interest in the product and no intentions to manipulate the reader (Fong and Burton 2006).

Given this previous research, therefore, it seems likely that online discussion sites constitute valuable means for companies to co-create online brand value. Specifically, it seems that online discussion sites help firms create online brand value due to (1) customers' possibility to contribute content, (2) customers' possibility to form relationships with the online brand and other online discussion site visitors, and (3) customers' perceived value-in-use of such discussion sites.

To examine how online discussion sites help firms co-create online brand value, we distinguish between different types of discussion sites. First, we adopt Puto and Wells' (1984) classification of advertising and distinguish between *informational* and *experiential* online discussion sites. In line with Puto and Wells' (1984) definition of informational advertising, we define an *informational online discussion site* as a site which provides the visitor with factual, relevant information in a clear and logical manner. In contrast, online discussion sites that focus on providing an experience or that "transform" the experience of using the brand by endowing this use with a particular experience, instead of rational and logical information, are called *experiential online discussion sites*. For an online discussion site to be experiential, it must make the experience of using the website richer, warmer, more exciting, and/or enjoyable than that obtained solely from an objective description of factual information (Puto and Wells 1984). It is worth noting that information and experience are not mutually exclusive categories of online discussion sites. Therefore, an online discussion site can be both informational and experiential (Holbrook and Hirschman 1982).

Another dimension that can be used to differentiate between different online discussion sites is *discussion site generator*. Specifically, we differentiate between *firm-generated online discussion sites* and *third-party-generated discussion sites*. We define firm-generated online discussion sites as sites that are initiated by firms and targeted toward their customers (e.g., <http://social.technet.microsoft.com/Forums/en/w7itprogeneral/>, a site generated by Microsoft for the discussion of Windows 7). In contrast, we define third-party-generated online discussion sites as sites that are initiated by customers or other firms and targeted toward other customers (e.g., <http://www.sevenforums.com/>, a Windows 7 discussion forum generated by an independent company). Both third-party-generated and firm-generated online discussion sites are likely to help firms build online brand value. Taking *online discussion site type* and *online discussion site generator* as the two dimensions, we propose the following online discussion site typology (see Table 1).

Table 1: Online discussion site Typology

		Online Discussion Site Type	
		Informational	Experiential
Online Discussion Site Generator	Firm	Firm-Generated Informational Online Discussion Sites	Firm-Generated Experiential Online Discussion Sites
	Third-party	Third-party-Generated Informational Online Discussion Sites	Third-party-Generated Experiential Online Discussion Sites

In the following, we will analyze one firm-generated informational online discussion site and one third-party-generated informational online discussion site to better understand *whether* discussion sites help companies create online brand value and if so which of the two types of discussion sites is better suited for firms to create online brand value. It should be noted that the following examinations of these different types of discussion sites are rather exploratory in nature.

DATA COLLECTION AND ANALYSIS

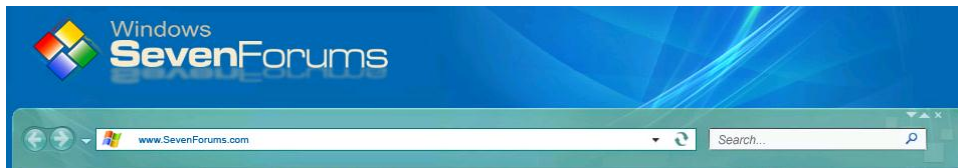
To test our hypotheses and gain a better understanding of how consumers use online forums, we conducted a study of two online forums devoted to the Windows 7 Operating System. The most popular (based on Google's PageRank) company-owned and third party forums were chosen for this study. These forums are <http://social.technet.microsoft.com/Forums/en/w7itprogeneral/> and <http://www.sevenforums.com/>, respectively, which we will refer to as "Microsoft's Forum" and "Seven Forums."

Before we analyze the contents of the discussions themselves, it is worthwhile to point out that the ownership of the forum has direct bearing on design elements that may enhance or detract from Microsoft's online brand value. Microsoft owns a number of brands, and their discussion forum offers a place for them to cross promote them to Windows 7 users. For instance, Figure 2 shows the search box on Microsoft's Forum, which has been branded as a "bing" search using Microsoft's Bing search engine. In contrast, Seven Forums has no incentive to, and does not, cross promote other Microsoft products. Rather, Seven Forums sells advertising space on its forum site. The products advertised may either complement Microsoft's products or compete with them. Furthermore, since Seven Forums is not affiliated with Microsoft it is not able to use Microsoft's branding images on its site. The result is a derivative Windows logo shown in Figure 3 that is similar but not quite the same as the actual Microsoft Windows Logo. Such a derivative logo can detract from Microsoft's online branding efforts. This initial finding is interesting as it shows that firm-generated online discussion sites seem to be better suited to build online brand value than third-party-generated online discussion sites.

Figure 2. Cross-promoting Microsoft's Bing search engine on their own Forum.

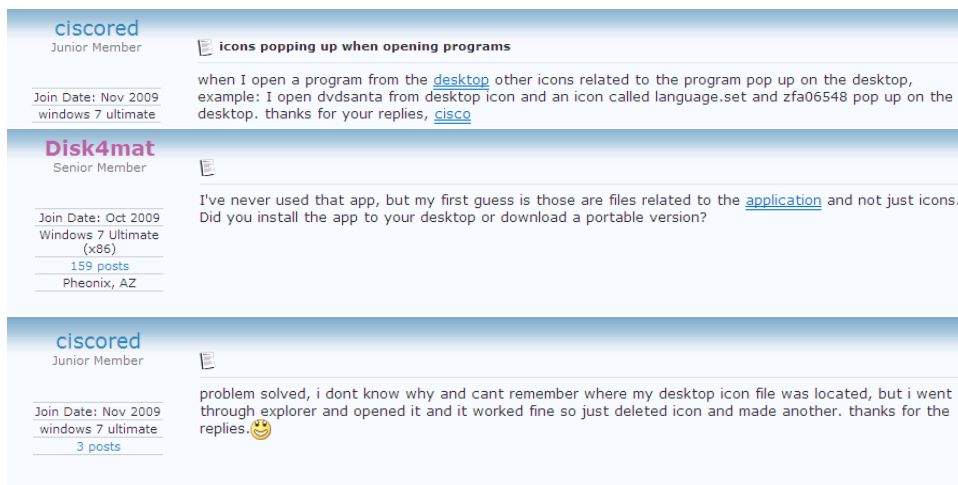


Figure 3. The Seven Forum's logo, imitative of the official MS Windows logo.



We now turn our attention to the actual content of the discussions that take place on the two forums. Figure 4 shows a typical conversation on Seven Forums. A forum user posts a question, another user replies with a suggestion, and the original user concludes the conversation by offering thanks for the suggestion and letting the other users know that the problem has been resolved. In this case, the conversation consists of three messages. When a question is not resolved quickly, the conversation can become lengthy as multiple users offer a variety of suggestions and also pose questions to clarify the problem if necessary. Discussions on Microsoft's forum follow a similar pattern.

Figure 4. A representative conversation on Seven Forums.



For this study, we downloaded from each forum 2,000 conversations that took place in the fall of 2009. We performed a statistical analysis of the text in the discussions to gain an understanding of the value of the discussions to the

users as well as to gauge user sentiment. The analysis was performed using R Statistical Software and the tm text mining package in particular.

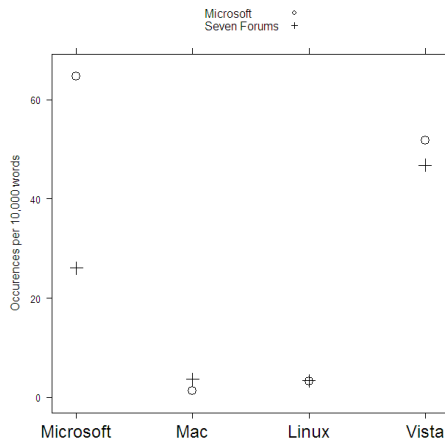
Table 2 shows the general characteristics of the conversations on the two forums. The conversations on Seven Forums were slightly longer. This may indicate that Seven Forums is a “chattier” and friendlier environment. Or, it may be that the users on Seven Forums are less knowledgeable and take longer to solve a problem than the users on Microsoft’s forum. One factor that may play into this is that actual Microsoft employees contribute to the discussion on Microsoft’s forum (though they are far from the sole responders) and their expertise may lead to quicker resolution of questions. We also see that about 18% more people participated on Microsoft’s forum.

Table 2. General characteristics of the conversations downloaded.

	Microsoft’s Forum	Seven Forums
Messages	14,600	18,992
Average Conversation Length	7.3 messages	9.5 messages
Unique participants	3,477	2,955

Figure 5 shows how often different operating systems were mentioned on the two forums. Microsoft itself was mentioned significantly more frequently on its own forum. This is an indication that a company-owned forum may help strengthen the company’s online brand value more than a third-party forum.

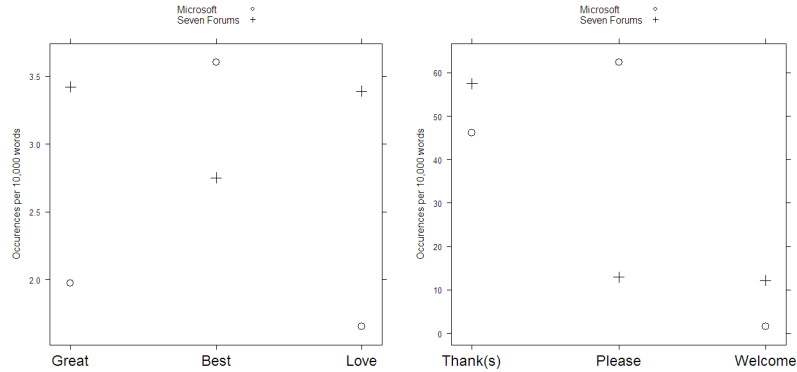
Figure 5. Mentions of Microsoft, Mac OS, Linux, and Vista on the two forums.



In order to assess the sentiment of the consumers using the two forums, we measured the presence of words with positive connotations as well as words that indicate a polite tone. Figure 6 shows the usage patterns of several words that highlight the trend found across a wide variety of words from each category. Words with positive connotations, such as “great,” “best,” and “love” are used with about the same frequency on both forums – from between 2 to 3.5

occurrences per 10,000 words. The word “please,” indicating politeness, is used approximately six times more frequently in Microsoft’s forum. This may be an artifact of the Microsoft forum’s shorter conversations or it may indicate that by hosting a forum a company is able to foster a more civil discussion surrounding its brand and the use of its products.

Figure 6. The frequency of positive (left) and polite (right) words.



CONCLUSION

The purpose of this research was to investigate the implications of the new brand logic, mirrored in the new evolving S-D logic in marketing, on brand value creation. In addition, we aimed to introduce the concept of online brand value, develop a typology of online discussion sites, and put forward relationships between online discussion site types and online brand value. Prior research has called for a better understanding of the implications of the S-D logic on brand value creation (Vargo and Lusch 2004). Moreover, prior research has repeatedly called for a better understanding of how to build brand value online (Christodoulides et al. 2006). This research has focused on one online marketing tool – *online discussion sites* – and examined how different types of *online discussion sites* help firms co-create online brand value.

The results of an initial empirical analysis suggest that firms can utilize online discussion sites successfully to create online brand value. However, the findings also suggest that firm-generated discussion sites are better suited for online brand value co-creation activities than third-party generated discussion sites. As a result, firms should not “outsource” their online brand building activities to third-party discussion sites but instead aim to set up their own online discussion sites and monitor the activities that take place on their sites carefully.

While these findings are interesting and have significant implications for brand managers, it should be pointed out that the empirical analysis was exploratory in nature. That is, we focused on analyzing only two discussion sites (one firm-owned and one third-party owned). As a result, the results are necessarily only representative for these two sites. Future empirical research is

necessary to examine online brand value creation in more detail and with a greater selection of online discussion sites.

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FORMAL EDUCATION AND QUALITY LEADERSHIP IN NIGERIA

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ABSTRACT: The paper underscores that formal education is a defining characteristic of modern societies, due greatly to existing structures called schools, availability of curricula, identifiable and distinct group of persons called teachers and those called pupils. It emphasizes that the eclectic nature of formal education provides an individual with a better understanding of his society, other cultures, a cross-cultural comparison of phenomena among others that could challenge societal development. It points that though formal education equips individuals with knowledge and skills that match their talents for future occupational roles the veracity of this is not always the case in Nigeria. Absence of guidance and counseling in schools fore-close attempts to identify aptitude and talents of pupils; frequent use of non-achievement parameter in the selection and recruitment of individuals to jobs, to the neglect of merit and the course studied; commonality of unethical practices in tertiary educational institutions frustrate quality education in Nigerian, resulting to “half-baked” graduates that could not defend their credentials and their mediocrity reproduces low productivity and a poor leadership in vocations and professions.

INTRODUCTION

It has been observed that every society has an educational system, theoretically best suitable for it. Invariably, education is a functional prerequisite of societies necessary for their survival through pattern maintenance. It has formal and informal aspects. Informal education is pejoratively described to fit traditional societies, while formal education is literally obtainable in modern societies.

Ordinarily, education refers to socialization, which is the process by which the culture of a society is internalized or interiorized into an individual. Ralph Linton (Haralambos, 1980) had defined culture as the resume of the customs and traditions, arts, values, mores, folkways, dances and technology as well as other capabilities of a society that are learnt, shared and transmitted from generation to posterity. For this, formal education is expected to make for an adequately socialized person: quite conversant with his socio-cultural milieu and also capable to appropriate wisdom from observations and scholarly findings even from other culture areas to enhance his personal advancement and societal development. Has education in modern Nigeria resulted to quality leadership? This is the focus of this paper, which was discussed under education in traditional societies; education in modern societies; highlights on qualities of a leader and manifest functions of formal education & prospects for quality leadership in Nigeria.

EDUCATION IN TRADITIONAL NIGERIAN SOCIETIES

Earlier societies had no separate social institution called education. They had no special buildings called schools and no people who earned their living as teachers. Rather, as an integral part of growing up, children learned what was necessary to get along in life (Henslin, 2008).

In traditional societies, education is said to be informal principally due to the paucity of well established institutions called schools; dearth of teachers and no specific group of people known as pupils. Individuals were pupils at a very short period after which they took to any of the agrarian occupations (farmers, hunters, fishermen etc) in the prevalent agrarian economy. Often times, a pupil at one level might be a teacher at the other level. There were no academic books to read, learn or teach as it was assumed that nature provides the books. Explicitly, individuals learnt about nature, to understand the weather and climatic conditions that enable them to know planting and harvest periods; to understand the types of leaves for curative purposes against certain ailments and illnesses among others.

Girigiri (2006) had pointed that in pre-colonial Nigeria individuals had good understanding of the medicinal efficacy of the roots, herbs and leaves of the plants in their environments; there was adequate knowledge of herbs to enhance fertility and potency; awareness on how to use roots and leaves to treat bites of poisonous snakes and stings of harmful insects; good post-partum management of a woman after child-delivery among others.

Education is also informal as individuals learn through observation. Girls follow their mothers (for instance, to learn how to prepare and cook foods; to learn feminine behaviour and habits; to do needle works etc) while boys follow their fathers (for instance, to imbibe masculine prowess; to hunt, farm, to do carpentry works etc). The socialization is into the tradition of the society only.

In traditional societies, deviant behaviour is scarcely accommodated. For this, the socialization gears towards conformity. Thus, an adequately socialized person in traditional societies is an ardent conformist. The psychology of individuals in traditional societies is immersed into a world-view that compels them to think alike; to please the elders and ancestors. There is restriction in the acquisition of knowledge as there is knowledge for every stage in life (adolescent stage, adulthood). At adolescent stage, individuals are taught the things required at that stage and later on at adult stage they learn to acquire knowledge suitable at that stage. Knowledge is buttressed by myths, which are stories that explain how things are what they are, how they came about and why they should be obeyed.

EDUCATION IN MODERN SOCIETIES

In complex societies, education is a separate institution with well defined functions to provide people with information not only to know how things are done, but to challenge how things are being done. Individuals are enlightened on how things are happening elsewhere. It has been observed that too much

knowledge brings confusion or disaster, but that is what education is expected to do. Contemporary education (formal education) tends to be anti-custom, anti-myth and anti-tradition as it does not produce “O Yes” individuals. It provides opportunity for people to express their opinion and to even ask questions. In brief, it enables social enhancement.

Typically, education is formalized and according to Henslin (2008) limited to those who have the leisure to pursue it. There are schools in the form of buildings; pupils and teachers are categorized into two distinct groups; academic books and tuition procedures (that is, curriculum) specify what to teach, how to teach etc. Education keeps people in ‘*status pupillari*’ (that is, puts individual out of work for a very long time). The word ‘school’, comes from the Greek Word *schole*’ meaning leisure (Henslin, 2008) and, notably to be a pupil for a considerable length of time is contingent on the wealth of the society and commitment to education in the society. There might be a problem of ‘*who should foot the bill on Education*’. In a buoyant economy, a substantial proportion of the country’s budget can be allocated to economy. This contrasts with the situation in a depressed economy where budgetary allocation on education could be sliced. When the government declines to play a leading role in supporting education, the burden of who foots the bill rests on the individuals.

If education is a national priority, the government takes it up as a responsibility, but when it is not, the government shakes it off. When the government needs more educated people, it takes the burden of providing for education as was the situation after Nigeria’s political independence in 1960 when it was necessary to Africanize the hitherto European positions. After filling the positions, education lost its momentum. The government has not felt obliged to train people it does not need as that would eventually exacerbate unemployment rate. Notwithstanding, education is imperative for people to be knowledgeable and to know their rights. This apparently raises question on What kind of education is obtained in Nigeria? Is it primarily to enable people to secure jobs?, To be knowledgeable and know their right and to provide good leadership or what?

HIGHLIGHTS ON QUALITIES OF A LEADER

Lewin, Lipitt and White (1939) had categorized leadership into: autocratic, laissez-faire and democratic leaderships to explain the typology that exists at given periods. Suffice it, however, to state that this study is delimited to education and quality leadership and did not extend to typologies of leadership. Five basic traits/qualities of a leader had been identified as honesty, intelligence, competence, forward-looking and inspiration. (<http://www.leadership501.com/five-most-important-leadership-traits/27>).

These qualities, particularly, when exhibited by an individual are sufficient to elicit approval and eventual selection by a group to be a leader. A considerable level of intelligence, honesty in the handling of affairs entrusted to one; competence or skill in performing a duty; having inspiration and being futuristic (forward-looking) in role performance are vital in leadership. There is

no gainsaying, therefore, that the interface of the above-mentioned qualities makes for quality leadership notable as indicated below:

- ❖ One who has a track record of achievement that is highly cherished in the society. In Nigeria, the list includes Dora Akunyili, Wole Soyinka, Chinua Achebe, Chike Obi, Bamanga Tukur, Odimegwu Ojukwu, Ngozi Iweala, Sanusi Ibrahim and Margaret Ekpo.
- ❖ One who occupies a status that is considered superior by his contemporaries in same occupation. Examples include Authur Nwankwo, Olusegun Obasanjo, Rev. Tansi, Kingsley Mbadiwe and Anthony Enahoro.
- ❖ One who emits stimuli that are responded to integratively by others. Notable in this list are Nnamdi Azikiwe, Obafemi Awolowo and Ahmadu Bello.

MANIFEST FUNCTIONS OF FORMAL EDUCATION AND PROSPECTS FOR QUALITY LEADERSHIP IN NIGERIA

Education provides knowledge and skills – whether the traditional three R's (Reading, Riting and Rthmetic) or their more contemporary counterpart such as computer literacy (Henslin, 2008). It prepares people for career in the society (that is, job placement) by providing them training in skills (Hoenisch, 2005), which makes for their selection into future occupational roles through testing and evaluating of students, matching their talents, skills and capacities to the jobs for which they are best suited (Parsons, 1964). Similarly, Davis and (Moore 1967) had contended that formal education rewards the most talented with high qualification, which provides entry into those occupations that are functionally most important to society. Coincidentally, Okereke (2003) had reiterated that oftentimes in Nigeria, non-achievement-oriented issues (such as one's contacts, race, tribal origin or other personal attributes) have a greater influence on employment into functionally most important occupations than merit and the course studied.

In Nigeria, there is dearth of guidance and counseling in secondary schools to ascertain the aptitude of students and to guide them accordingly in the pursuit of courses in science, technology or humanities. Besides, it has been observed that many tertiary educational institutions in Nigeria are fraught with the unethical practice of selling examination marks to students, due greatly to poor remuneration of the teaching staff. In effect, several students get grades or graduate in classes of honour that they do not merit and which they could not defend. When they move into occupations, their mediocrity eventually reproduces low productivity and a poor leadership in their vocations and professions. The foregoing is highly correlated with the prevalent craze for diplomas and degrees in Nigeria. According to Collins (1979), industrialized nations have become a credential society, which by implication means the use of diplomas and degrees as '*sorting devices*' to determine eligibility for a job.

In Nigeria just as in many other countries, possession of a certain level of formal education is pre-requisite for modern economic jobs. Due greatly to the

inability of Nigerian governments (federal and state) to adequately finance the educational needs of the tertiary educational institutions, the internally generated revenue (IGR) from tuition and miscellaneous fees is over-exploited. Distant education programmes are established to attract students from whom revenue could be raised, through tuition and miscellaneous fees. Distant education is theoretically designed to provide higher education to adults aged 25 years and above, who could not pursue higher education on a regular programme, but possesses the requisite credentials for admission. The good intentions of the Distant Education is seemingly betrayed by considerable population of the students who are market women that sell banana and groundnut; garden eggs; tomatoes etc with poor lecture attendance and who surprisingly earn high scores in courses for which they cannot defend. Making quality leaders from this bunch is a misnomer.

- ❖ Durkheim had indicated that education enables people to know their culture and provides opportunity for the transmission of civilization (Hoenisch, 2005). Notably, Parsons (1964) had argued that after primary socialization within the family, the schools take over as the socializing agency and, thus, serves as a bridge between the family and society, preparing children for their adult role. Typically, Nakamura (2006) pointed that in Japan the law required schools to cultivate a respect for tradition and culture, a love for the nation and homeland that have fostered them. *Is this the same in Nigeria?*

It has been observed that the formal education given in Nigeria from primary to University level lacks local or indigenous content. It addresses problems outside the cultural background of the individuals. For this, most recipients of formal education scarcely possess capacity to solve their social problems. According to Frantz Fanon (1967), it produces '*black skin, white mask*' scholars. The concept of 'black skin, white mask' connotes preference for foreign languages to the neglect of local language; getting scholars and leaders that are culturally marginal (neither local nor foreign), which erases originality and creates status tension. An important implication of this is existence of leaders in Nigeria that are quite good at formulating brilliant policies (economic and political), whose effective implementations are often frustrated by socio-cultural factors.

It is worrisome that most beneficiaries of formal education in Nigeria do not wish to be associated with informal education. They despise informal education.

The concept of '*Egbe bere, Ugo bere*' in Igboland which in Yoruba translation is '*Gbe Igbeaye ifaaye-gbara eni*!' (meaning 'live and let live') highly cherished in pre-colonial Nigeria as a charter for collective survival and group solidarity is almost obliterated in favour of 'individualism' and 'competition' extolled by formal western education. Individuals now attempt to out-smart and out-do each other in competition for material wealth. At present, there is a wide

currency for individuals to envy the progress of other persons and to work against their career development through the popular '*pull him down syndrome*', which comprise false allegations malicious petition writings, incriminations and recriminations among others to ensure disgrace and humiliation of the other. Also, the dictum '*Onye aghala Nwanne ya*' in Igboland, which in Yourba is '*Ma a wa ilosiwajuom onikeji re*' (meaning being a 'brother's keeper') is now perceived as 'primitive' and not appropriate for modern life where individualism and self-orientation define the psychology of people. In effect, individuals in leadership positions in Nigeria feel no moral obligation towards the livelihood of their subjects.

Quality leadership in Nigeria is scarcely available as most of those in leadership positions have integrity problem of corruptly enriching themselves without consideration for the welfare of their subjects and for sustainable development. Sustainable development according to Wane (1994) is 'meeting the needs of the present people without compromising the ability of future generations to meet their needs'. Are the needs of the Nigeria citizenry ever addressed by their leaders? To what extent has Nigeria met the millennium development goals (MDGs)? Observably, steady electricity is still an utopia in Nigeria in spite of several verbal promises; good nutrition is not affordable by a considerable proportion of persons in Nigeria as remarkable efforts have not been made to reduce absolute hunger; adequate medication is so inaccessible to most persons in Nigeria that emigration to India for medical treatment has now become a most considered option; most Nigerian roads are largely un-maintained that they have ultimately become death-traps; poverty and unemployment are still high. A pointer to absence of quality leadership (with adequate blend of competence, inspiration, forward-looking, honesty and intelligence) in Nigeria is existence of several agitations by the citizenry for improvement in their living standard.

The Lagos State government of Nigeria threatened to sack 47,000 workers in the state civil service if they embarked on an industrial action against non-payment of ₦7, 500 minimum wages (Nigerian Tribune, Wednesday 21 June, 2000). Thirty -one (31) workers of the National Electric Power Authority (NEPA), Osogbo-Nigeria were layed off few hours after receiving their promotion letters (Nigerian Tribune, Friday 15 September, 2000). Consistently, in Edo State of Nigeria there was non-payment of November and December 2002 salaries to civil servants, while pension arrears varied from 4 to 6 months (The Punch Newspaper, Monday January 6, 2003). Similarly, the Abia State Government of Nigeria owed workers three (3) months salary (The Punch Newspaper, Monday Jan. 20, 2003). Also, workers in the Ministry of Environmental Sanitation at Yenagoa, Bayelsa State-Nigeria, protested over the non-payment of their monthly salaries from November 2009 to January, 2010 and the removal from payroll of more than 1,000 of them who were maliciously described as ghost workers (The Nations Newspapers, Wednesday 20 Jan., 2010).

- ❖ Some schools serve as baby sitters for families in which both parents work, or for single working mothers (Bosman, 2007), in preparation for education. This also alleviates for parents the problem of household activities, especially when the custodies are safe.
- ❖ Formal education helps in the establishment of enduring relations as it enables people of different sorts to be brought together, thereby making social relations to be established amongst them. Specifically, schools promote political integration through: the development of national identity such as having students salute the flag, sing the national anthem (Henslin, 2008) and inculcating mainstream idea and value of the society to immigrants (Carper, 2000, Rodrigues, 1995). It has also been observed in Nigeria and many other countries that people with disabilities (the blind, the deaf etc) are placed in special schools or classes, such as School of the Deaf and Dumb and other similar institutions that alienate them from the mainstream society. In USA as observed by Henslin, (2008) and US Department of Education (2007) there is mainstreaming or inclusion by which educators incorporate students with disabilities (physically challenged) into regular school activities and provide wheelchair ramps to those that cannot walk, interpreters that use sign language to the deaf among others.

In Nigeria, the physically challenged attend same Universities with their counterparts that are not disabled. It has been observed that some of the persons with disabilities perform comparatively better than those without disabilities. Paradoxically, persons with disabilities (whether educated or not) are generally disenfranchised at general elections in Nigeria and are scarcely given leadership positions, notwithstanding that they might perform better leadership than individuals without disabilities.

CONCLUSION

Education provides knowledge and skills necessary for occupational roles, but the selling of grades by lecturers to students and the resultant graduation of students some of who cannot defend their certificate/degree raises doubts on the quality of leadership such persons could make. Formal Education in Nigeria is designed to fit the British prototype and in some cases the American tradition to the neglect of local/indigenous content. This partly accounts for poor leadership in Nigeria. Most individuals in leadership positions in spite of their sometime brilliant policies are timid when they eventually confront socio-cultural problems. Due greatly to their psychology being immersed in individualism and 'competitiveness' that define and characterize the developed countries, they are easily and hurriedly alienated from the values and normative behaviour of their people.

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EDUCATIONAL TECHNOLOGY FOR NATION BUILDING: WAY FORWARD FOR TEACHER EDUCATION IN NIGERIA

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ABSTRACT: This paper explains the close relationship between curriculum and educational technology and presents the current definition of educational technology as it relates to the new economic order as a catalyst for development in all ramifications. The paper recognizes the impact of the new teaching/learning environment as a platform for learners to be actively involved in constructing their own meanings and understandings in response to constructivists' view of learning. The result is that, the role of the teacher has changed from transmitter of knowledge to that of a facilitator. Literature suggests that with access to computers and the Internet, teachers and students will gradually start using them for education purposes. The paper therefore presents the research project on teachers and students' use of computers in schools in developed countries, which resulted to models for computer integration in schools, but not without cost analysis for sustainability.

INTRODUCTION

The decision about what to teach falls within the realm of curriculum theories; techniques and resources for teaching/learning have been issues for educational technology. However, the interrelationship between these two kinds of concern has intensified with the advent of technology in education. This trend has been creating new challenges for education in terms of how to integrate technologies to support learning experiences towards the achievement of the ultimate and immediate goals of education through the curriculum. Teachers and learners need teaching and learning skills to enable them acquire knowledge and the skills they require to strive in the 21st century. This is essential as the world shifts towards a new economic order which places much emphasis on knowledge, ability to engage in lifelong learning based on technology-based opportunities, human creative ability with the focus on intellectual capital as a key to economic advancement (Olele, 2001).

This paper discusses the knowledge-based economy and its implications for education and teachers, the current definition of educational technology, and its relationship with the knowledge-based economy, the new teaching / learning environment in relation to the flow theory; theories of learning supporting the new teaching/learning environment; and technology integration models.

KNOWLEDGE –BASED ECONOMY

Obanya (2004:142) and Price (2006), posit that the knowledge based economy relies on creative ideas and the application of technology in the global

context. This suggests an economy in which knowledge is created and applied to enable you expand your mind's capabilities to new ideas, and to turn creative ideas into productive actions for all dimensions of development. To Obanya (2004) and Price (2006), the knowledge economy stands on two pillars—globalization and technological changes, a suggestion that global economy is “powered by technology, fueled by information and driven by knowledge”. The emergence of this new economic order has serious implications for education. It must prepare individuals for the 21st century world of work which requires digital age literacy, inventive thinking, and effective communication. The onus of all these lies on education: to prepare students for workplace through curriculum reforms and teacher education. “No nation can rise above the quality of its teacher” (Federal Republic of Nigeria, 2004: 39). Teachers cannot teach what they do not know, and cannot teach with the resources that they cannot use. To this end, teachers will have to learn how to use ICT facilities and how to integrate them to support learning experiences. The issue then is on how best we can enhance learning with the use of ICT facilities via educational technology. This requires a better understanding of the current definition of educational technology.

DEFINITION OF EDUCATIONAL TECHNOLOGY

Educational media developed separately at different times of history as distinct media, each with its own technological basis, vocabulary, and theoretical framework to support its use. Today all media formats have converged in the computer and the Internet as digital media. The principles derived from new theories of learning that emanates from the use of computers and the Internet for educational purposes contributes to good instruction (Driscoll, 2005). This calls for reforms in teaching and learning in terms of using digital media as tools and processes for teaching / learning (Heinich, Molenda, Russell, & Smaldino, 2002; Newby, Stepich, Lehman & Russell, 2006).

The Association of Educational Communication and Technology (AECT) approved a new definition of educational technology to guide our thinking in the 21st century world of knowledge (Januszewski & Molenda, 2008:1-15; 49-80). It states as follows:

Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources.

This definition highlights some key phrases/words – “study and ethical practice”, “facilitating learning and improving performance”, “creating, using, and managing”, “technological processes and resources”. These phrases emphasize the fact that educational technology is a study and practice guided by ethics, it is not just a tool; that the purpose of educational technology is to facilitate learning and improve performance—this twin purpose reflect educative

dimension for quality teaching/learning; and puts learning and performance at the forefront of the field. The definition tells us how to do this, “by creating, using, and managing”. It places the teacher as ‘manager’ of instruction and the learner as the user. This signifies the role of the teacher as manager, designer, and facilitator of learning. The definition tells us what we work with: “technological processes and resources”. These are processes and tools for facilitating learning and for performance improvement. Thus, educators select and evaluate technological processes and resources, create learning environments, and design learning experiences; they assess learners to establish their needs and at the end evaluate performances (Hiynka and Jacobsen, 2011).

From the definition, the onus of quality education is on the teacher; the teacher must embrace the novel and innovative teaching/ learning experiences that have become possible because of ICTs (UNESCO, 2002).The teacher should focus on learning about technologies and how to integrated technology into education and across the curriculum. This involves various approaches:

- Use of computer and the Internet as assistant or productivity tools: word processors, graphic tools, presentation software, databases, electronic spreadsheet, telecommunication/Internet tools, assistive technology and desktop publishing;
- Use across the curriculum based on categories of computer-assisted instruction (CAI): drill and practice, tutorial, simulation, instructional games and problem solving; instructional methods: co-operative learning, discovery, demonstration, discussion, presentation, role-playing, graphical representations and virtual laboratories.
- Use of information from websites, CD-ROMs, or other online resources such as Wikipedia, interactive maps and atlases, electronic journals, and other references

(Ellington, Percival, & Race, 1993; Tinio, 2003).

Steketee (2005:102) classified ICT integration into four approaches stating the focus of each approach:

1. ICT skills development approaching-learning the fundamentals, use of productivity tools such as word processing, spreadsheets, database and graphic programme;
2. ICT pedagogy approach – showing students how to integrate ICT into the classroom;
3. Subject specific approach – learning how to integrate ICT into specific areas (curriculum units such as Mathematics, English, Science, and so on;
4. Practice-driven approach – providing exposure to the use of ICT in practical aspect of teaching/learning. First for developing lessons, second, for information: receiving and sending e-mails, downloading attachment, creating PowerPoint slides. A teacher should use productivity tools for designing activities and use ICT facilities in the day-to-day classroom activities.

All these depend on technological literacy. To achieve any meaningful application, we have to apply a two-step process-acquire technological skills, and then, use them to learn. This will enable teachers to use computer skills to prepare lessons and communicate with other educators and experts (Camp & Satterwhite, 1998).

THE NEW TEACHING/LEARNING ENVIRONMENT

Csikszentmihalyi (2002) asserts that intrinsic motivation emanates from tremendous concentration of work with enormous involvement. He discovered that challenging task requires effort, time, attention, and that any involvement of this nature creates a rewarding psychological experience known as 'flow'. Flow theory argues that intrinsic motivation comes from active engagement with challenging task, with sense of control, confidence, and personal efficiency, that can result from immersive activities. It describes a state of complete absorption or engagement in activities where individuals are so involved with goal-driven activity that nothing else seems to matter. Research shows that flow state has positive impact on learning (Seel, 2000; Wang & Reeves, 2007).

Dickey (2007) posits that flow is more likely to occur if the activity is meaningful and is coupled with instructional scaffolds and de-briefing. Kiili (2005) uses the flow theory as a framework to facilitate positive user experience and engagement to maximize the impact of digital learning environment. The manifestation of flow theory in digital learning environment is that it is interactive, engaging, participatory and learners have greater responsibility for their own learning-they seek out, find, synthesize and share their knowledge with others (UNESCO, 2002). ICT environment creates opportunities for learners to engage in authentic tasks in authentic contexts, using authentic tool, and is assessed through authentic performance (Wang & Reeves, 2007).

The new teaching/learning environment motivates learners. ICTs such as videos, television and multimedia, computer software that combine text, sound, and colourful moving images can be used to provide challenging and authentic context that will engage the student in the learning process. Interactive radio likewise makes use of sound effects, songs, dramatization, comic skills, and other performers conventions that enable the students to listen and become involved in the lesson being delivered.

THEORIES THAT SUPPORT ICT ENVIRONMENT

Several theories of learning have informed our understanding of the nature and context of learning in the new learning environment using technological processes and resources. The most prominent theories include; behaviorism, Vygotsky's socio-cultural theory and zone of proximal development, constructivism, information processing, self-regulatory learning, situated learning and distributed cognition. Principles derived from each of these theories are based on the assumption that learners are active participants in the learning process, utilizing their prior knowledge and experiences to seek, and

construct knowledge in a meaningful context, and sharing/distributing knowledge to others. The principles and the application of some of these theories gave rise to various instructional methods, techniques and activities. Driscoll (2005:394) captures ICT learning environment as:

... that which embed learning in complex realistic and relevant environment, provide for social negotiation as an integral part of learning: support multiple perspectives; use multiple models of representation, encourage ownership of learning and nurture self awareness of knowledge construction.

Studies in innovation indicate that successful change is always bottom-up in nature. The driver of bottom-up innovation is the learner. Learners are joyful and committed when they are given the opportunity to learn by doing, to engage in collaborative construction of knowledge and to experience coaching and mentoring relationship. ICT environment provides a platform for these types of learning as a move beyond learning by been passive. In effect, the new teaching /learning environment is learner-centered. This approach to learning is derived from constructivism which views learning as a process in which individuals 'construct' meaning based on prior knowledge and experiences. Experiences enable individuals to build mental models or schemas which in turn provide meaning. The learner is not passive but is actively involved in creating knowledge, transforming information, constructing hypotheses, and making decisions using his/her mental models. Another form of constructivism called social construction also emphasizes the role of others in helping learners to master concepts that they would not be able to understand on their own- more knowledgeable others. Teachers and students need interpersonal skills in order to work collaboratively in both face to face and virtual environment.

RESEARCH ON TEACHERS, STUDENTS AND COMPUTERS

Researchers in The Apple's Classroom of Tomorrow (ACOT) project in a 10 year study investigated what happens to students and teachers when they have access to technology whenever they need it. ACOT equipped classrooms in five different schools with computers; it also helped fund coordinators at each school site, and provided technical and instructional assistances. The study noted that technology had an enduring positive impact on engagement. For the students, collaborative work commenced, social skills improved, information were represented in multiple ways, independent learning commenced, longer class periods, and project-based learning intensified. On the part of teachers, it revealed that technology in the classroom did not change the teacher, instead it served as a lever for progress through five distinct stages. Teachers moved through learning about the technology, to adopting technology to support traditional teaching, to adapting it to classroom practices, to appropriating it for project-based and co-operative student work, to inventing new uses for it. Both teachers and students were learning and doing new things. In the ACOT

classrooms, transformation of teaching/learning occurred with technology serving as catalyst (Siddiqui, 2008; Parkay and Stanford, 2010).

The finding of ACOT project can best be summarized in the words of Mhyre (as in Altun, 2007:56) that:

“We must address the use of computers together with the teachers’ understanding of pedagogy and subject matter in order for the technology to play a significant role in improving our schools. If not, the investment in computer technology, for our children’s classroom will end up as another example of a failed attempt to reform and renew our schools.

Both the ACOT project and the classification by Skeketee (2005) suggests that the infusion of ICT to support learning is developmental from skill acquisition to graduated use, so long as there is access and use of computer, internet access and use. Both can support learning in different ways (Ely, 2002). This however, must include technical and instructional assistance, and funds for contingencies. Thus, computer and the internet have become tools of teaching and learning for total transformation of education for quality assurance. Quality education will bring about new ideas that can stimulate creativity and innovation which are ingredients for entrepreneurial activities, for job and wealth creation and hence national development (Olele and Williams, 2010; Olele and Uche, 2011).

The implication of this study is that once there is access to computers, and connected to the Internet, to be shared in the classroom or laboratory, coupled with technical and instructional assistance, students and teachers will progressively embrace the use of computers for educational purposes. This reaffirms that computer has become resources for teaching and learning. (Ely, 2002; Lee & Owens, 2004).

SOCIAL NETWORK SERVICES

The traditional social structure of school, is one in which teachers dispense knowledge to students through direct and indirect classroom activities. In this type of learning environment, the teacher is totally in control; in technology-mediated communication, the classroom becomes learning community where social structure transforms into one in which the teacher and learners work collaboratively to achieve important goals. Mobile devices such as cell phones, smart phones, palmtops, and handheld computers, table PCs, and laptops have all become mobile learning devices that can be incorporated into teaching and learning to complement face to face teaching/learning.

Online social networking refers to convergence of mass communication channels such as social network. Websites with interpersonal channels such as text-based chat, voice chat, video-calls, blogs and discussion groups. These channels allow a user to create a profile of him/her self or using personalized texts, audio, graphic, video, and pictures in the social network; then other

individuals or groups can access the profile. With the security feature in the network, a user is allowed to choose who can view his/her profile or who to be friends with. There are several social network services – Facebook, MySpace, YouTube, Skype, and many more. Each social network services have their own focus.

A growing body of research supports the use of social network service for educational purposes. Through these networks students and teachers share information and resources, create learning communities, improve school wide communication with students and staff, improve students motivation and engagement, help students develop a more social and collaborative views of learning and create a connection of real-life time learning (Williams & Sawyer, 2001; Seel, 2000)

TECHNOLOGY INTEGRATION MODELS

Levine (cited in Jhurree, 2005:470) emphasizes the need to plan technology integration based on school needs. He states that technology integration requires planning, implementing and evaluation. He proposes 8 - step model:

- Formulating a planning team;
- Collecting and analyzing data;
- Formulating the vision, goals and objectives;
- Exploring available technology;
- Determining training and staff needs;
- Developing an action plan;
- Implementing the plan;
- Evaluating the outcomes.

In another study, Newby, Stepich, Lehman & Russell (2006:259) present 5-step model:

- Create a technology committee;
- Develop a vision of education and articulate a role for technology in that vision;
- Assess ongoing technology implementation efforts;
- Identifying general goals and plan how to achieve them;
- Develop specific objectives and have teachers create implementation plan.

These two models are saying the same thing. There must be technology integration committee in each school that will be charged with the responsibility of how best to integrate technology in schools. This is significant because the cost of installing computers in the classroom involves fixed cost and recurrent cost for upkeeps. The fixed cost involves: physical facilities, hardware and networking, software, upgrades and replacements; while the recurrent cost involves: professional development, connectivity, including Internet access and telephone lines, maintenance and support including utility and supplies. With the establishment of standing committee, schools can work out how to bear the

variable cost after the initial installation for sustainability (Perraton & Creed, 2002; Cister, 2002).

CONCLUSION

The issue of technological integration in education is imperative and non-negotiable as the 21st century places emphasis on creative problem solving and the application of information in new and different contexts. The recent definition of educational technology presents the field as a catalyst of knowledge industry. So much support comes from theories of learning for technology-based learning environment. Researchers have proved that given access to ICT facilities, technical and instructional assistance, teachers and students can embrace the use of technology for quality assurance, if adequately planned. This is eminent since today's students have cell phones, iPods, video cameras, laptops, and digital cameras. Social network platforms can enhance the way students communicate and socialize through network. Students send and receive information through cell phones, the Internet, e-mail, text-messages, and are entertained. Effective teachers must cash on the use of these devices as powerful tools for enhancing students' inquiry, reflection, and problem solving. They must also realize that technology cannot be grafted onto existing teaching strategies; it must be integrated into these strategies.

Finally, educational institution at all levels in partnership with government should establish technology committees in different schools or local government areas for the integration of technology. This committee should be able to work out the modalities for respective schools based on needs analysis for sustainability.

RECOMMENDATIONS

- All stakeholders in different schools should be involved in the plan for economic, social, political and technological sustainability.
- Schools should create technology integration committees to plan a holistic way of embracing technology for learners and teachers
- Planning should be based on thorough needs analysis and cost effectiveness.
- The planning should include securing funds, procurement of ICT facilities, providing support assistance for technical and instructional purposes and how to bear the recurrent cost.

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CONTINUING CHANGES TO THE ADOPTION TAX CREDIT AND EXCLUSION

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ABSTRACT: This paper discusses the evolution of the adoption tax credit and exclusion which were first legislated in 1996. Several changes, updates, and extensions have been legislated since then. The most recent changes to these adoption tax benefits were legislated in 2010 by the Patient Protection and Affordable Care Act and the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act. These most recent changes will be detailed. The potential reversion of the adoption tax benefits back to pre-2001 legislation levels will be mentioned. Some policy issues will also be discussed.

INTRODUCTION

The adoption tax credit and exclusion were legislated by The Small Business Job Protection Act of 1996 (P.L. 104-188). These tax benefits were first available for the 1997 tax year. Features and limitations of these tax benefits were detailed by Smith and Tew (1999, 2001). The Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) (P.L. 107-16) expanded and extended these adoption tax benefits. The Job Creation and Worker Assistance Act of 2002 (P.L. 107-147) provided some corrections and clarified some ambiguities raised by the 2001 legislation. Changes in the adoption tax credit and exclusion from these two pieces of legislation were discussed by Smith (2002, 2005). Other pieces of legislation have made minor changes to the adoption tax benefits. The Patient Protection and Affordable Care Act of 2010 (P.L. 111-148) provided additional changes to these tax benefits which are effective for 2010 and 2011. These changes were made because the 2001 legislation would otherwise have sunset by the end of 2010, causing the adoption tax benefits to revert to what they would have been without the 2001 legislation. Later in 2010, the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (P.L. 111-312) made further changes to the adoption tax benefits by extending the EGTRRA tax provisions for two additional years through 2012.

This paper will provide some of the background of these two tax benefits, including the features and limitations associated with them and how some of these features and limitations have changed over time. The effects of the 2010 legislation on these tax benefits will also be discussed, as they are not insignificant. The paper will also mention what will happen to these adoption tax benefits if the 2001 tax legislation is allowed to expire as scheduled at the end of 2012. Some policy issues will be raised briefly.

ADOPTION TAX CREDIT—1997 - 2010

The adoption tax credit was legislated in 1996, effective first in 1997. It was legislated as a credit for qualified adoption expenses. A credit is a direct reduction of the amount of taxes owed. This particular credit is a 100% credit, meaning that taxes are reduced one dollar for each dollar of qualified adoption expenses incurred.

The adoption tax credit has a dollar limit. As originally legislated the limit was \$5,000 (\$6,000 for adoptions of children with special needs). This limit was in place from 1997 through 2001. In 2002 the limit was increased to \$10,000 and was indexed to increase each year. This new indexed limit also applied to adoptions of children with special needs. However, starting in 2003, those who adopted children with special needs could take the maximum credit regardless of whether or not they incurred qualified adoption expenses.

The credit is also limited by modified adjusted gross income (MAGI). From 1997 through 2001 the credit phased out for MAGI levels between \$75,000 and \$115,000. The lower limit on this \$40,000 phaseout range was increased to \$150,000 in 2002 and was also indexed for years beyond 2002. For 2010, the phaseout range goes from \$182,520 to \$222,520.

A third limit on the credit was legislated in 1996 and kept in the 2001 changes. The adoption tax credit was a nonrefundable credit. In other words, the credit could only reduce the tax liability to zero. Because of the large dollar limit on the credit and its nonrefundable status, a carryforward of unused credit was allowed for up to five years beyond the year of the original credit.

The timing of the credit depended on when the adoption was finalized. Adoption costs paid in the year of finalization or after are eligible for the credit in the year of payment. Adoption costs incurred in a year prior to finalization are eligible for the credit in the year following payment. The timing rules are different if a foreign child is adopted. In that case, no expenses are eligible for the credit until the adoption is finalized. In 2003 when the maximum credit became available for adoptions of children with special needs regardless of whether qualified adoption expenses were incurred or not, the timing rules for these adoptions changed slightly. The credit was still available under the same timing rules for any actual adoption expenses incurred. However, any difference between the adoption expenses incurred and the maximum dollar limit became eligible for the credit in the year of finalization.

ADOPTION EXCLUSION—1997-2010

The exclusion for employer-paid adoption costs was also legislated in 1996, effective for years starting in 1997. The employer was required to have an adoption assistance plan in place, and the expenses reimbursed had to be qualified adoption expenses. Amounts reimbursed by an employer cannot qualify for the credit. In essence, both the credit and exclusion can be claimed for the same adoption, but not for the same expense.

Limits similar to those which exist for the credit also exist for the exclusion. The original dollar limit on the exclusion was \$5,000 (\$6,000 for adoptions of children with special needs). This limit was in place from 1997 – 2001. As of 2002, the dollar limit was increased to \$10,000 and was indexed for years beyond that. This new indexed limit also applies to adoptions of children with special needs starting in 2002. Starting in 2003 the exclusion for adoptions of children with special needs became available regardless of qualified adoption expenses incurred. Although one might assume the exclusion would still be limited to the amount of employer payment, the IRS administratively interpreted the law such that employer payment is not required for the employee to claim the exclusion for the maximum dollar limit. One would assume the employer might pay for at least some of any actual adoption expenses incurred (up to the limit provided in the employer's adoption benefit package). However, the employee can also exclude any remainder up to the maximum dollar limit even without employer payment.

Like the credit, the exclusion is limited by MAGI. From 1997 through 2001, the exclusion phased out for MAGI levels between \$75,000 and \$115,000. The lower limit of the \$40,000 phaseout range was increased in 2002 to \$150,000 and indexed for future years. For 2010, the MAGI phaseout range for the exclusion is from \$182,520 to \$222,520.

Also like the credit, the exclusion has specific timing rules. For domestic adoptions the exclusion can be claimed in the year the employer pays the qualified adoption expenses. For foreign adoptions, no exclusion is available until the adoption is finalized. Starting in 2003 because the maximum exclusion was available for adoptions of children with special needs regardless of adoption expenses incurred, any employer payment for actual adoption expenses could be excluded in the year of payment. Then the difference between any actual adoption expenses paid by the employer and the maximum dollar limit could be excluded in the year of finalization.

2010 LEGISLATION

The tax changes passed as part of the EGTRRA were all scheduled to revert after 2010 back to the legislation in effect prior to EGTRRA. This reversion would have affected the adoption tax benefits. To avoid this reversion, the Patient Protection and Affordable Care Act of 2010 included some temporary changes to the adoption tax benefits. These changes are effective for only 2010 and 2011 as currently enacted.

The maximum adoption tax credit and exclusion for 2010 under the indexing that had been in place would have been \$12,170. The new legislation changed this amount for 2010 to \$13,170, increasing it \$1,000 above what it would have been. These dollar limits are indexed further for 2011. Thus, the 2011 dollar limit for both the credit and exclusion is \$13,360 (IRS, 2010b). As indexed, the MAGI phaseout range for both adoption tax benefits for 2011 is from \$185,210 to \$225,210.

Perhaps the more significant result of this legislation is that for 2010 and 2011, the adoption tax credit has become refundable. This means that taxpayers will no longer have to carry forward unused amounts of the credit to future years because all amounts which qualify for the credit will provide an immediate tax advantage in the year the credit is claimed. This change may have a large impact on low-income taxpayers who previously had to get the credit over multiple years or even lose some of the credit because of a low tax liability to offset with the nonrefundable credit. In addition, it will also have a large impact for those who finalize adoptions of children with special needs, as the entire credit can be taken regardless of expenses and is no longer dependent on a tax liability to offset. For adoptions of a sibling group with special needs, this may mean very large amounts of refundable credit are immediately available to the adoptive parents.

The Patient Protection and Affordable Care Act increased the credit and exclusion amount and made the credit refundable for 2010 and 2011. However, the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act extended the original EGTRRA provisions through 2012. Thus, when the Patient Protection and Affordable Care Act provisions expire at the end of 2011, the adoption tax benefits will revert to the EGTRRA rules for 2012. This means the credit will once again become nonrefundable. The dollar limit on the credit and exclusion will also revert back to what they would have been for 2012 under the original EGTRRA indexing.

REVERSION TO PRE-EGTRRA RULES

Even with the changes made by the 2010 legislation which postponed the sunset of the EGTRRA provisions, the pre-EGTRRA rules for adoption tax benefits will return after 2012 unless further legislation is passed. However, the original legislation for these adoption tax benefits also had its own sunset provision effective after 2001, so if the EGTRRA sunset with respect to adoption tax benefits is allowed to take place after 2012, the adoption tax benefits will change drastically. The exclusion will disappear entirely. The adoption tax credit will also disappear except in the case of a child with special needs.

For an adoption of a child with special needs, the \$6,000 credit will still exist but will be limited by the original MAGI phaseout range (\$75,000 - \$115,000). Both the dollar limit and the phaseout range will not be indexed. The credit for adoptions of children with special needs will only be available for actual qualified adoption expenses. Oftentimes, there are very few actual expenses to adopt a child with special needs, as the costs are covered through other government programs for many of these children who are already in state custody. In addition, the credit would again become nonrefundable with a five-year carryforward period.

There is strong social support for adoption tax benefits. Who could stand up in Congress and speak against them? These benefits seem to have broad, bipartisan support. However, it is still important to recognize the possible results if further legislation is not passed.

POLICY ISSUES

Technically, no tax law is permanent. However, some tax laws are more temporary than others. Some tax laws are specifically passed on a temporary basis for various reasons. One is that the tax benefit may be intended to deal with a temporary situation and thus is legislated for a short time period. Another is that the temporary legislation is a test of a specific benefit to see if it accomplishes its objective. In these cases, the tax law may be extended if it seems to fulfill its purpose. Sometimes tax benefits are passed on a temporary basis because the political capital does not exist to pass them for longer periods of time, perhaps because of the cost involved to the government.

The adoption tax benefits were originally legislated through 2001, likely to see if they accomplished their purpose. These tax benefits were then expanded and extended through 2010. Because of the social desirability of these tax benefits, they have now been extended through 2012. It is likely they will be extended again, but nobody knows when. Also, no one knows what changes will be made to the tax benefits even if they are extended. With this piecemeal legislation, it is difficult to make any long-term plans for using adoption tax benefits, especially since the timing of adoptions is often beyond the control of the adoptive parents for multiple reasons. Currently enacted legislation, if not amended, will result in the reversion at the end of 2012 as mentioned above. This makes it difficult to plan for adoption tax benefits because of their temporary nature and the uncertainty in future legislation. Much of our federal income tax legislation is intended to influence behavior, but it is difficult to have a consistent influence on behavior if the tax benefits are uncertain and subject to change.

It is also true that when tax law changes, the transition from one law to the updated law is not always straightforward, thus leaving it open for misinterpretation or misapplication. When dollar limits and MAGI limits are indexed and change each year, how are amounts treated from one year to the next, especially for a credit or exclusion that may be claimed over several years for any specific adoption effort? As administered by the IRS, during the period from 2002 to 2010 when the dollar limit and the MAGI limit have changed for indexing, the amounts for qualified adoption expenses are subject to the dollar and MAGI limits in the year they become eligible for the credit or exclusion. Thus, if taxpayers had qualified adoption expenses which were eligible for the credit in 2007 equal to or greater than the 2007 dollar limit, they could potentially claim that entire dollar limit for 2007. If they incurred additional qualified adoption expense for that adoption in 2008, they could potentially claim the credit in 2008 for the amount of the increase in the dollar limit as indexed for 2008. However, this line of thinking was not consistently applied when the dollar limit was changed from \$5,000 in 2001 to \$10,000 in 2002. As administered then, any pre-2002 adoption expenses were limited to the pre-2002 dollar limits, even if these expenses became eligible for the credit in 2002 or later.

For years from 2002 to 2009 any credit that was eligible for carryforward was not again subject to the MAGI limits in the year it actually provided a tax benefit. However, it was subject to the tax liability limit in future years, as it was nonrefundable and thus could only be used to offset existing tax liability. With the change of the credit in 2010 to a refundable credit, the issue then arises as to whether credit amounts carried forward from years prior to 2010 become refundable since the credit is now refundable for 2010 and 2011. The legislation passed in 2010 does not specifically deal with this issue, but the IRS interpretation and implementation is that all adoption credit amounts carried forward from prior years become refundable in 2010 (IRS, 2010a). This interpretation will be of great benefit to any taxpayers who have large amounts of credit carried forward from prior years, some of which may have expired if not used within the five-year carryforward period.

Since the adoption tax credit has increased in amount substantially since its inception in 1997 and because the credit can be claimed for adoptions of children with special needs regardless of the incurrence of adoption expenses, it is not surprising that the IRS has issued guidance that now requires the substantiation of the adoption or adoption effort (IRS, 2010a). This published guidance relates specifically to the credit, but one might also assume substantiation would be required for the exclusion as well. In addition, the state's determination of special needs will also need to be documented in the case of the credit for the adoption of a child with special needs. At this point, taxpayers do not need to submit evidence of specific expenditures (although such documentation should be maintained in case of an audit), but this requirement might not be far off. These efforts may be needed to prevent or minimize fraud related to these potentially large tax benefits related to adoptions.

CONCLUSION

The adoption tax credit and exclusion have evolved significantly since they were first enacted in 1996. The eligibility for more adoptive taxpayers to get more benefits under these tax provisions has grown. The Patient Protection and Affordable Care Act of 2010 and the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 made the most recent amendments to these tax benefits for 2010, 2011, and 2012. The most significant change from this legislation is that the credit is now refundable for 2010 and 2011. It is likely that additional changes and extensions will be made to tax benefits related to such socially desirable actions. However, policy issues should always be considered when changing or extending these types of tax benefits.

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THE BOWL CHAMPIONSHIP SERIES (BCS) DOES NOT ADD UP: HOW A MATHEMATICALLY FLAWED FORMULA COULD CROWN THE WRONG CHAMPION OF COLLEGE FOOTBALL

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ABSTRACT: The Bowl Championship Series (BCS) for crowning the US college football national champion uses a multi-criteria decision analysis (MCDA) that is based on at least four false assumptions or myths inherent in its mathematical formula. The BCS uses three different scores—two human polls and six computer generated ranks—to determine which two teams should play for the vaunted college football national championship. The first myth is that using ordinal or ranked data produces the same accuracy as interval or quantitative data. The second myth is that each of the three criteria will have the same impact on the outcome or that the three criteria are equally weighted. In fact, it can be shown today by using a rudimentary sensitivity analysis that the way that the BCS keeps the scores affects the weights of, or the impact of, each of the measures. The third myth is that human polls are unbiased while the computer-generated measures are treated as biased. This myth is demonstrated by the BCS dropping the highest and lowest computer scores from the model but not any human poll scores. The fourth and final myth is that there is no reasonable mathematical alternative to the current BCS model.

INTRODUCTION

The 2010 National Champion has been crowned. Auburn beat Oregon 22 to 19. So, why are the BCS results, and the myths that affect them, important? First, being in BCS bowl games, especially the championship game, is worth many millions of dollars for the participants. It has a definite, direct economic impact on those teams, on their universities and on the conferences represented. Moreover, the BCS ranking is often used to determine conference championships when there is a tie. This year that occurred in both the Big 10 and the Big 12 when both had three teams with equal records that had beaten one, but not both, of the other teams with which it was tied. Second, it becomes a great source of pride for the institutions that win the championship, for their fans, and for their students. Everyone college football fan is aware that the Southeastern Conference has won the last five BCS championships. Finally, the BCS national championship is a case study of the impact of theory misapplied in practice. It shows a typical flaw committed by those who utilize multi-criteria decision analyses and are not aware of the mathematical implications and impacts of the models they employ. It is a common technique utilized in college classes as a “rational” or an “optimal” decision model.

Can we know for sure that the BCS will choose the right or wrong teams to play for the national championship every year? No, not if there are only two teams with legitimate claims to be included. This year, in fact, the BCS probably got lucky. Boise State lost a game late in the season and Auburn came back to beat Alabama after being down by three touchdowns in its final regular season game. Suppose Auburn had been a once defeated Southeastern Conference (SEC) champion. Or, suppose Boise State and Wisconsin or Ohio State had been undefeated. The hue and cry would be enormous. But, this was a year with only three major undefeated and obvious teams to play for a championship, and one of them, TCU, was not from a major conference. The final human polls often try to overcorrect for an anticipated computer score flaw. This year the BCS was correct by accident, but in 2008, it can be shown that Texas should have played Florida for the national championship. After all, both teams eventually beat Oklahoma by ten points. What a game that might have been. A few years earlier, the flaws in the BCS determined that Texas, and not California, should play in the Rose Bowl. (Teasley and Hornyak, 2005, 2010)

The BCS might argue that its approach is very popular. Just glancing at current conversations about the BCS approach, however, does not corroborate that conclusion, and several polls substantiate the unpopularity of the BCS. (Campbell, Rogers, and Finney, 2007) For years there has been much acrimony about the BCS, and for good reason. (Eckard, 1998) What will be shown here is how the BCS constructs its multi-criteria decision analysis and what the flaws are in the model. Simply put, the BCS does not add up. (Martinich, 2002) As such, it provides an excellent lesson in how to construct a more accurate decision model. Thus, it provides an excellent lesson for academics and decision makers alike.

Multi-criteria decision analyses (MCDAs) have been used many times in the attempt to capture the impact of several criteria on a decision outcome (Nagel, 1984; Nagel, 1985; and Nagel, 1987) The purpose here is to demonstrate how the misuse of measurement for developing an MCDA index can result in an inaccurate answer, which can have serious impacts and implications for those involved. It does matter how you keep the score (Teasley, 1989). The use of two or more criteria, however, typically requires the model maker to generate a common denominator in order for all the scores or measures to be combined accurately into one summative score. They are often tempted, as with the BCS, to reduce scores to ranks and then to sum those rankings. It is this process of converting interval level scores to a lower level of measurement (ordinal level) that distorts the relationships between the scores and can yield a false result.

2010 BCS FINAL RESULTS

Table One reports the final results of the BCS for 2010 for the top twenty college football teams in America. This table gives the appearance of mathematical precision and complexity. It shows the top twenty major college football teams ranked one to twenty, with Auburn as the top ranked team and South Carolina ranked number twenty. To derive that average score on which the BCS rankings are based, a Harris Poll and a USA Today Poll of voters rank

teams from first to twenty-fifth. A number one ranking gets a score of 25 points, while being ranked twenty-fifth gets one point. The points for the Harris and USA Today polls are determined by adding all of the respective ranking scores for each team. Hence, Auburn got 2809 out of a possible 2849 points for a percentage score of .986. The USA Today percentage score was determined in the same manner. Auburn got 97.4 percent of 1475 possible points (1437), but was actually ranked slightly behind Oregon in that particular human poll. So far, so obvious, and so good.

What is not reported in Table 1 are the actual scores computed in the six computer rankings. These rankings are provided, respectively, by Anderson and

Table 1
Final 2010 BCS College Football Rankings for Top 20 Teams

BCS Rank	Team	BCS Avg.	Harris Points	Harris % Scr.	USA Points	USA %Scr.	Comp. Ranks						Comp. % Score
							AH	RB	CM	KM	JS	PW	
1	Auburn	.9866	2809	.9856	1437	.9742	1	1	1	1	1	1	1.000
2	Oregon	.9720	2773	.9730	1450	.9831	2	2	2	2	2	2	.960
3	TCU	.9102	2613	.9168	1348	.9139	3	3	4	4	7	3	.900
4	Stanford	.8365	2421	.8495	1239	.8400	8	7	5	5	4	5	.820
5	Wisconsin	.8041	2443	.8572	1276	.8651	5	4	12	10	12	8	.690
6	Ohio State	.7660	2293	.8046	1200	.8136	6	6	7	13	16	10	.680
7	Oklahoma	.7297	1926	.6758	1008	.6834	4	11	3	6	5	6	.830
8	Arkansas	.7274	1992	.6989	1008	.6834	9	8	11	3	3	4	.800
9	Michigan State	.6922	2104	.7382	1104	.7485	7	12	8	15	14	11	.590
10	Boise State	.6137	1800	.6316	914	.6197	13	5	9	14	15	9	.590
11	LSU	.6134	1625	.5702	826	.5600	11	9	10	7	6	7	.710
12	Missouri	.5276	1368	.4800	712	.4827	10	18	6	11	9	12	.620
13	Virginia Tech	.5032	1623	.5695	900	.6102	18	16	16	21	20	17	.330
14	Oklahoma State	.4897	1232	.4323	718	.4868	12	13	13	9	11	15	.550
15	Nevada	.4336	1302	.4568	640	.4339	17	14	15	17	18	14	.410
16	Alabama	.4328	1155	.4053	521	.3532	15	10	18	12	8	13	.540
17	Texas A&M	.4151	1077	.3779	542	.3675	14	19	14	8	10	16	.500
18	Nebraska	.3967	1136	.3986	607	.4115	16	17	17	16	13	18	.380
19	Utah	.2549	685	.2404	375	.2542	20	15	19	19	21	19	.270
20	South Carolina	.2418	631	.2214	345	.2339	19	20	20	18	17	20	.270

Source: *BCSFootball.org*

Hester (AH), Richard Billingsley (RB), the Colley Matrix (CM), Kevin Massey (KM), Jeff Sagarin (JS), and Peter Wolfe (PW). They each use different algorithms and they produce widely divergent scores ranging from fractions less than one (Anderson and Hester and Colley Matrix) to over 300 points (Billingsley) to various scale ranges in between (Massey, Sagarin, and Wolfe). See Table 2. So, the BCS is left with the original grade school dilemma of deriving common denominators so that divergent scores might be summed. The BCS accomplishes this by first converting the interval computer-generated scores to ordinal ranks and, similar to the human polls, awarding 25 points for being ranked number one, to one point for being ranked twenty-fifth. So, Auburn was ranked number one on all the computer rankings and got the maximum number of points allowed, or a percentage score of 1.000. Oregon, on the other hand, was ranked second in all the computer rankings. It got the second highest

percentage of computer rankings (.960), which equals $(24*6/25*6)$. Actually, the highest and lowest scores are dropped to avoid outlier errors, so while the outcomes are the same for these two teams, the actual formula would be $(24*4/25*4)$.

It is a major contention here that the BCS formula generates errors by converting interval level data to ordinal level. In other words, the difference between 1.00 and .96 is not 2 to 1, but that is what is implied in the formula. With the human polls, the BCS starts with a large number of rankings and combines them to generate an interval level percent. By combining over a hundred rankings, this produces a relatively satisfactory approximately interval level result. With the computer scores, however, only four are utilized in the final BCS tabulations, and this opens the door for more obvious errors.

BCS MYTH 1: RANKS PRODUCE ACCURATE RAW SCORES

Table 2 reports the 2010 final raw scores generated by the six computer rankings used in the BCS. There is not a lot of diversity since Auburn got the highest scores on all six computer rankings and Oregon finished second. The BCS assigned value from one to twenty-five points based on the ranking (from twenty-fifth to first, respectively) to determine the percentage scores found in Table 1 above. It seems like an appropriate way to compute a total computer ranking score, but it can generate error, as we shall see.

Table Three reports the coefficients of correlation and determination for the top twenty football teams in 2010 between the computer raw scores in Table 2 and the computer rankings in Table 1. This table shows that there are imperfect correlations between the raw scores and the ranking. The average correlation is .93, with a range of .89 to .96. Relatedly, coefficients of determination average .87 and range from .79 to .92. What this means is that, since the coefficient of determination equals the percentage of variation that is consistent between the two sets of scores, there is thirteen (13) percent of variance unaccounted for or thirteen percent error inherent in the computer ranking percentages when those computer raw scores are converted to ranks by the BCS. Thus, scores and ranks of this mathematical transposition produces unequal results.

Table 2
2010 Final Raw Computer Scores for Top 20 College Football Teams

RK	Team	AH	RB	CM	KM	JS	PW
1	Auburn	0.839	338.420	1.003	3.146	100.62	9.125
2	Oregon	0.809	330.614	0.931	2.901	95.250	8.303
3	TCU	0.797	326.676	0.892	2.664	90.540	7.671
4	Stanford	0.769	291.730	0.888	2.644	91.750	7.493
5	Wisconsin	0.782	300.572	0.848	2.453	87.570	7.122
6	Ohio State	0.773	294.438	0.869	2.371	85.670	7.006
7	Oklahoma	0.788	288.892	0.920	2.589	91.420	7.389
8	Arkansas	0.766	291.504	0.856	2.667	93.590	7.497

9	Michigan St.	0.770	288.837	0.867	2.366	86.090	6.995
10	LSU	0.759	290.334	0.861	2.556	91.270	7.209
11	Boise State	0.743	297.808	0.859	2.368	85.980	7.018
12	Missouri	0.762	273.422	0.872	2.453	88.570	6.923
13	Virginia Tech	0.624	275.805	0.794	2.110	83.330	6.599
14	Oklahoma St.	0.745	282.575	0.845	2.456	87.570	6.762
15	Nevada	0.709	278.603	0.808	2.312	84.800	6.789
16	Alabama	0.723	289.490	0.793	2.419	88.960	6.832
17	Texas A&M	0.731	261.834	0.811	2.470	88.270	6.730
18	Nebraska	0.714	274.134	0.786	2.340	86.540	6.452
19	Utah	0.676	277.747	0.769	2.167	82.980	6.396
20	South Carolina	0.694	258.960	0.758	2.215	84.920	6.313

Sources: the web sites for each individual computer ranking service

Table 3
Correlations Between Computer Raw Scores and Computer Rankings in the 2010 BCS

	AH	RB	CM	KM	JS	PW	Avg.
r	.93	.94	.96	.93	.94	.89	.93
r ²	.86	.88	.92	.86	.88	.79	.87

MYTH 2: ALL THREE CRITERIA HAVE THE SAME WEIGHT OR IMPACT

What the BCS fails to realize is that one might start with equally weighted criteria, but depending on the range of scores in the model and the number of criteria, the weights to the various criteria will be affected by those scores. Using redundant criteria, for example, doubles their weight or impact—like using two human polls.

Table 4 shows the results of a threshold sensitivity analysis with regard to the 2010 BCS results comparing Auburn and Oregon. The first two sets of scores comparing Auburn and Oregon are taken directly from the BCS reported data. The weights are entered into the model per the BCS formula. The middle set of scores converts the actual Harris, USA, and Computer percentage scores to an allocation of the total. So, Auburn got 50.32% of 1.9586 total percentage points allocated to the two teams, and Oregon got 49.68 percent. Overall, Auburn got 50.37% of the total points allocated while Oregon got 49.63%. So, there's no surprise so far.

The third set of scores, or threshold values, reports the break-even points in the model. These are the scores in the model that would be required to bring the overall percentage allocation between Auburn and Oregon to 50/50. So, for example, if the Auburn Harris% were lowered to .9426 (below the actual Oregon score of .9730), then the model would break-even with overall allocation percentages equal for each team. A score greater than 1.0 is obviously invalid in the model. So, there is no legitimate change in Oregon's percentage scores that could change the outcome. What this means is that to change model any one of

Auburn’s scores would need to be less, and much more so (USA% is already lower) than it actually achieved. Of course, if they were all slightly less, then the result would change. In this model, there is no appropriate change in the Oregon scores that would change the results since they would all have to be greater than 1.00 or 100%.

Table 4
SENSITIVITY ANALYSIS
COMPARING AUBURN AND OREGON IN 2010 BCS RANKINGS

		Actual Scores and Weights			
		Harris%	USA%	Computer%	
1.	Auburn	0.9856	0.9742	1.0000	
2.	Oregon	0.9730	0.9831	0.9600	
	Weights	1	1	1	
		Allocation Percentages			
		Harris%	USA%	Comp.%	Overall
1.	Auburn	50.32%	49.77%	51.02%	50.37%
2.	Oregon	49.68%	50.23%	48.98%	49.63%
		Threshold Values			
		Harris%	USA%	Computer%	
1.	Auburn	0.9426	0.9317	0.9564	
2.	Oregon	1.0174	1.0279	1.0038	
	Weights:	-2.47	5.90	-0.09	

What is also reported in the model is what the weights would need to be to change the outcome. It is easy to see that they are all different. If negative weights are not conceptually possible in the model, then these do not represent possible changes. On the other hand, the threshold weight of 5.90 demonstrates that if the USA Today poll percentage had six times the weight of the other two criteria, then Oregon would be ranked number one.

Table 5 reports another threshold sensitivity analysis, but with a switch of the Harris poll percentage between the two teams—Auburn and Oregon. What this table shows is that although Oregon would have been ranked number one in both human polls, the overall allocation percentages would still show that Auburn would be ranked number one by “winning” only the computer ranking percentages, while Oregon led the human poll percentages since the “Allocation Overall” still favors Auburn 50.16 to 49.84. In other words, to change the result, the weight of either human poll would have to be weighted five times greater, or the computer polls have about three times the impact of the human polls. How could this be?

Table 5
THRESHOLD SCORES FOR 2010 BCS FOR AUBURN AND OREGON WITH THE
HARRIS POLL% REVERSED
SENSITIVITY ANALYSIS

		Allocation	Threshold Values		
		Overall	Harris%	USA%	Computer%
1.	Auburn	50.16	0.9548	0.9560	0.9813
2.	Oregon	49.84	1.0044	1.0018	0.9783
Weights:			2.47	3.07	0.54

Remember from Table 4 that the differences in the human polls were only .0126 (.9856 - .9730) and .0091 (.9831 - .9742). On the other hand, the difference in the computer ranking percentage is .0400 (1.00 - .960). Thus, the difference in the computer ranking percentage (.040) is greater than the combined difference in the two human poll percentages (.0217). How could this happen that one score had a greater weight or impact than the other two? It happened by converting raw scores to ranks which distorted and exaggerated the differences found in the actual computer rankings. Converting interval data to ordinal can obviously change the results. It not only can, but it has. It determined who would be in the Rose Bowl in 2004 and it was used to determine who would play Florida for the national championship for 2008 (Teasley and Hornyak, 2010).

MYTH 3: THE HUMAN POLLS ARE UNBIASED, BUT THE
COMPUTER RANKINGS ARE BIASED

A basic assumption in the human polls is that they are unbiased, while the computer rankings are biased. The removal of the highest and lowest scores in the computer rankings implies that the computer scores are biased and cannot be trusted—that the computer scores will yield more outliers. Yet, looking at the history of the BCS, pollsters, there are many accounts of how the human pollsters are affected by spin. There were the efforts by Texas supporters and Coach Mack Brown to move ahead of California for a spot in the Rose Bowl. In 2006, during and immediately after the SEC championship game, Florida Coach Urban Meyer spinned Florida ahead of Michigan (which had been ranked number two the week before) along with the help of SEC Commissioner Mike Slive, and SEC announcer Gary Danielson during the game. Michigan was idle that week and it did not help that Ohio State (from the Big 10) was ranked number one. Two teams from the same conference might not have much appeal (Wetzel, Peter and Passan, 2010).

Maybe the most appealing story involves the wife of LSU coach Les Miles in 2007. In that year, LSU lost two games and no two-loss team had ever played for a national championship. Miles feared another mediocre comparison to Nick Saban, who had previously won the national championship for the Tigers

from Baton Rouge. To console him, his wife Kathy remarked that the two losses had occurred in overtime and that LSU was actually undefeated in regulation. That line was adopted by LSU public relations and it convinced enough voters to give LSU a shot at the national championship that year, and as they say, the rest is history.

But, does eliminating some of the computer polls actually change the results. You bet (See Table 6). This year, for example, in the computer rankings, Wisconsin would replace Stanford at number 4; Michigan State and Oklahoma would change places at seventh and ninth. Moreover, LSU would still be number 10 and Boise State number 11 as before the Colley Matrix confession and recalculation; Missouri and Virginia Tech would change places at 12 and 13; Alabama and Texas A&M would switch and Nebraska would move up to number 16 in the computer rankings.

MYTH 4: THERE IS NO REASONABLE, EASY ALTERNATIVE TO THE CURRENT BCS MODEL

This may be the easiest myth to dispel of all. The two human polls calculate percentages from the total possible scores which is easy to calculate. All the first place votes are awarded twenty-five point. So, at 25 times the number of voters 114 (one was missing) for a total possible score of 2850. Auburn got a score of 2809 which was 98.6 percent of that total. The correlation between the human poll raw scores of the top twenty teams and the resulting percentages was perfect ($r = 1.0$). There is, however, an alternative way to achieve the exactly same result.

If, instead of the total possible score, the Harris percent was a percent of the highest score (2809), then Auburn would get a 1.0, and the correlation between the resulting scores for the whole set of top twenty teams between the percent of the actual score derived from using the total possible score as the denominator or the highest achieved score as the denominator is also perfect ($r = 1.0$). In other words, an easy alternative to computing percentages when the total possible score is unknown (as with the computer ranking scores) is to simply calculate percentages of the highest achieved score. It produces the same result.

Table 6 illustrates how easy it is to convert the raw computer scores reported in Table 2 to percentages of the top score, which in this case was always Auburn's score. In the table, therefore, Auburn got a 1.0 for its score and all the other teams received a percentage of the Auburn score in return. Oregon's score of .964 is returned as .809/.839 from Table 2.

Not only is this mathematical transformation easy, it correlates with the actual scores perfectly ($r = 1.0$). On the other hand, the correlation between the BCS derived computer percentage and one derived from the interval transformation shown in Table 3 yielded a less than perfect correlation ($r = .93$; $r^2 = .87$). Therefore, the 2010 BCS incorporates thirteen percent error from its conversion of computer scores to ordinal ranks, but converting the raw computer scores to the "percentage" of the highest score yields zero error because the two sets of scores are perfectly correlated.

Table 6
BCS Raw Computer Scores (in Table 2) Converted to Percentage of the Top Score

RK	Team	AH	RB	CM	KM	JS	PW	AVG
1	Auburn	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	Oregon	0.964	0.977	0.928	0.922	0.947	0.910	0.941
3	TCU	0.950	0.965	0.889	0.847	0.900	0.841	0.899
4	Stanford	0.917	0.862	0.885	0.840	0.912	0.821	0.873
5	Wisconsin	0.932	0.888	0.845	0.780	0.870	0.780	0.849
6	Ohio State	0.921	0.870	0.866	0.754	0.851	0.768	0.838
7	Oklahoma	0.939	0.854	0.917	0.823	0.909	0.810	0.875
8	Arkansas	0.913	0.861	0.853	0.848	0.930	0.822	0.871
9	Michigan State	0.918	0.853	0.864	0.752	0.856	0.767	0.835
10	LSU	0.905	0.858	0.858	0.812	0.907	0.790	0.855
11	Boise State	0.886	0.880	0.856	0.753	0.855	0.769	0.833
12	Missouri	0.908	0.808	0.869	0.780	0.880	0.759	0.834
13	Virginia Tech	0.744	0.815	0.792	0.671	0.828	0.723	0.762
14	Oklahoma State	0.888	0.835	0.842	0.781	0.870	0.741	0.826
15	Nevada	0.845	0.823	0.806	0.735	0.843	0.744	0.799
16	Alabama	0.862	0.855	0.791	0.769	0.884	0.749	0.818
17	Texas A&M	0.871	0.774	0.809	0.785	0.877	0.738	0.809
18	Nebraska	0.851	0.810	0.784	0.744	0.860	0.707	0.793
19	Utah	0.806	0.821	0.767	0.689	0.825	0.701	0.768
20	South Carolina	0.827	0.765	0.756	0.704	0.844	0.692	0.765

CONCLUSIONS

This paper addressed four myths inherent in the BCS MSDA formula to determine which teams should play for the national championship of major college football in this country. Winning a national championship is very important for those teams, but it is also very prized by a team's fans and conference. More than that, there are millions, if not billions of dollars involved with payouts to teams and conferences that play in the national championship, but also in team merchandise, future ticket sales, contributions to the athletic program, and more. We did not set out to propose a different approach or formula for the BCS, but rather, to scrutinize closely how the final BCS score is determined and how it might be easily improved to provide a more accurate result. To do so, four myths were examined.

Myth One was that interval level scores and ordinal level scores will produce equally accurate results. They do not. Myth Two was that all the criteria have an equal impact or weight on the model. They do not, especially if the scoring ranges are different. Myth Three was that human pollsters are unbiased, while computer rankings are biased. There is abundant evidence, without even reviewing decision heuristics, that humans are easily influenced or biased in their results. Finally, myth four was that there was no easy fix for the computational problems experienced by the BCS. There is one. If percentages are computed based on the highest score contained, the results are more accurate

than those obtained by first transforming raw scores to ranks as a means of obtaining a common denominator for compilation purposes.

While it has been found that the current BCS mathematical model has a flaw in its ointment and that there is a relatively easy fix, it was not shown that in 2010 that there would be much change in the final result. It has been found previously, however, that the flawed BCS formula did produce inaccurate results that did affect which teams would play for the national championship, and thus, which team should have actually been the champion. Nevertheless, it has been shown that , and how, BCS myths in its mathematical formula have impacted the BCS final rankings and who has played for the national championship, and they could actually determine the national champion of major college football in the near future. While there is a mathematical flaw in the BCS MSDA developed to determine which teams should play for the championship, there is an easy fix to make the final results more accurate and valid.

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AIRLINES AND THE EUROPEAN UNION EMISSIONS TRADING SCHEME: A MARKETING SOLUTION

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ABSTRACT: This study examined public demand as it relates to reduced emission in air travel. In 2009, the Aviation Emissions directive of the European Union came into effect and required all airlines serving Europe to comply with the Kyoto Protocol. The Aviation Emission directive required serving airlines to cap airline emissions at 97% of 2004-2006 levels of CO₂ by 2012. To determine price sensitivity of European and North American travelers this study used a survey of leisure air travelers to gauge how much more the flying public would be willing to pay for flights taken on an aircraft that is more environmentally friendly. The results indicate that there is willingness within the flying public to pay more for green air travel.

INTRODUCTION

This study examined public demand as it relates to reduced emissions in air travel. Specifically, the goal of this study was to determine to what extent the leisure traveling public in North America and Europe will support reduced emissions air travel.

The use of fossil fuels as a source of energy is contentious on several points. The main environmental concern with the use of fossil fuels is the increase in the average temperature of the Earth from the release of carbon dioxide (CO₂) and concentration of other greenhouse gases in the atmosphere (Collins, Colman, Haywood, Manning, & Mote, 2008). Evidence concerning global warming in on the increase, and research suggests that conditions such as the number, strength, and duration of heat waves not predicted for three decades, may be commonplace much sooner (Fischer, 2010). A second concern regarding the use of fossil fuels is the desire for energy independence and dwindling supply. Overall, it is widely accepted that fossil fuels are a finite resource, and humanity's transition to alternative energy is inevitable

On February 2, 2009, the Aviation Emissions Directive of the European Union (EU) Emissions Trading Scheme (EU ETS) came into effect (Laborde, 2010). This directive added airlines serving Europe to the Kyoto Protocol. The Kyoto Protocol, signed in 1997, is an international agreement linked to the UN Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized nations for reducing greenhouse gas emissions (UNFCCC, n.d.). The Kyoto Protocol, as it relates to airlines serving EU destinations, caps total airline emissions from aircraft at 97% of the average CO₂ emissions from 2004 through 2006 starting in 2012

(EurActiv, 2008). This emissions cap will be gradually stepped down over the years, and on threat of fines will increase the pressure on airlines to produce fewer CO₂ emissions. The United States is not a signatory of the Kyoto Protocol however; the EU ETS will apply to all airlines serving the EU regardless of country of origin.

PURPOSE OF THE STUDY

How can airlines positively respond to the increased regulatory pressure of reduced emissions short of rate increases? To answer this question, this research sought to determine if air travelers in Europe and North America would be willing to pay for the difference, and if these populations significantly differ from one another.

Woodcock, Banister, Edwards, Prentice and Roberts (2007), referenced a study by the Intergovernmental Panel on Climate Change (IPCC), stating that the aviation industry was likely responsible for 3.5% of human-induced global warming in 2001; a number on the rise that could reach 15% by 2050. Woodcock et al. stated that “aviation is believed to have a greater effect on climate change than its carbon emissions alone” (p. 1079). Ecosystem Marketplace in their yearly publication “State of the Voluntary Carbon Markets 2010” explained that “while voluntary carbon market transaction volumes remained relatively small, the marketplace thrived as an incubator of innovative protocols, registries, alliances, and project types (Hamilton, Sjardin, Peters-Stanley, & Marcello, 2010, p. i).”

Lufthansa, on its booking website, has given the option for environmentally concerned passengers and businesses to compensate for the CO₂. A passenger can donate to Lufthansa’s environmental partner, myclimate.org. For example, a round trip from Frankfurt, Germany to John F. Kennedy Airport in New York produces 1.214 tons of CO₂ per seat, and to compensate for that, customers can donate 24 Euro and travel with a clear conscience (myclimate.org, 2007). Other airlines such as United Airlines have similar carbon offset programs.

METHODOLOGY

The objective of this study was to determine if North American and European air travelers are willing to pay more for air travel on greener airlines; and if the level of that value is significantly different between these two populations. An online survey was used for the collection of data, which was then used to develop descriptive and inferential statistics for analysis.

Requests to complete the survey were sent out by the researchers via e-mail to personal acquaintances and asked respondents to forward the survey to their friends, family, and colleagues. The survey questions were available in German, Italian, French, Spanish and Swedish. In a series of six questions, respondents were asked which airline they would choose between: *Airline A* or *Airline B*. Ticket prices were associated with each choice. In the first question, tickets from *Airline A* and *Airline B* cost exactly the same amount, \$320 each. In

the second question the price for *Airline B*'s ticket was 10% more expensive than *Airline A*'s ticket. The ticket price of *Airline B* increased by 10% of *Airline A*'s ticket for each successive question until the ticket price for *Airline B* was 50% higher than the ticket price for *Airline A*.

A respondent's choice in question one of the *Short Haul* flight determined if there was any concern for cleaner air travel. A respondent's choice in question two determined if ticket price was a factor in cleaner air travel. Respondents that chose *Airline B* in question two were then identified as holding a quantifiable level of monetary value for cleaner air travel. In the cases that a respondent chose *Airline A* for question two, it was clear that these respondents held no monetary value for cleaner air travel. The subsequent questions for the *Short Haul* situation were posed to determine the maximum level of financial value held for cleaner air travel by the respondents. The level of value was indicated by the highest dollar amount for *Airline B* a respondent chose to pay, relative to *Airline A*. These levels of value were aligned and compared by continent.

In situation two, titled *Long Haul*, the researcher presented a situation largely the same as situation one, with the exception that the respondent are taking a transatlantic flight. The ticket prices for *Airline A* and *Airline B* were increased to reflect a common price for a transatlantic flight, \$1400 each. Again, the ticket price for *Airline B* was the same as *Airline A* in question one; and as in the previous situation, *Airline B*'s ticket price was increased by 10% in every subsequent question up to a 50% increase of *Airline A*'s ticket price. The same analysis described for situation one was then applied to situation two. Respondents were asked to identify the number of tickets they would normally buy when taking a family vacation.

RESULTS

A total of 432 surveys were collected, 404 of which were valid. The sample contained 60% respondents from North America and 40% from Europe. Respondents were presented with two situations. Situation one was designed to represent the domestic U.S. flight market. Respondents were given the following situation: You (and your family, if applicable) are traveling by air to see relatives; There are two flights available to you: Airline A and Airline B; Your preference for either airline is the same; You know that Airline B uses a new but more expensive technology and that the flight from Airline B will produce 50% less harmful emissions into the atmosphere.

Figure 1 shows the percentage of the sample that were willing to pay more for lower emissions. When prices for airline tickets were the same for *green* tickets and non-*green* tickets, 92% of the sample would choose the green airlines; however, when green tickets prices were 50% more than non-*green* tickets, only 4% of the sample indicated that they would still be willing to buy tickets at increased prices.

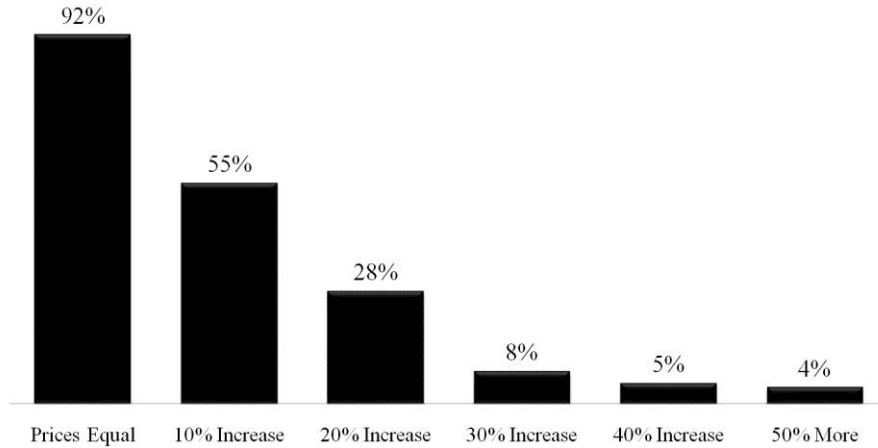


Figure 1. Percentage of sample willing to buy airline green airline tickets

We then attempted to determine how much more respondents were willing to pay for flights that produce fewer emissions. First, it was necessary to quantify the respondents' level of value of reduced emissions. To quantify that level, the researchers derived the highest percentage price increase that respondents chose *Airline B* from the survey results. The results show that while the percentages of respondents are, as expected, roughly the same for both markets, the distribution of the concerned vary slightly. The increase in the percentage of respondents with 0% value in the international market is manifested in the reduction of respondents for the 10% and 20% values when compared to the domestic market. The markets nearly meet at all subsequent levels beyond 20%.

DISCUSSION

Situation one was designed to represent the domestic air travel market. The results of situation one indicated that respondents held a clear concern for reducing harmful emissions in air travel before having to consider any price increases in tickets. Situation two, the international scenario, follows along the same lines as situation one, though to a lesser degree. The reduction in vibrancy for *Airline B* in situation two likely related to the more pressing concern of dollar amount increase rather than percentage increase between the two ticket choices; as only dollar amounts were given for comparison in the survey. Yet the same analysis applies: delivering measurably greener operations provides a direct marketing avenue appealing to 90% of the international leisure air traveling market; 36% of which are willing to exchange some portion of their income for cleaner air travel.

There is a clear reduction in the respondent shift from *Airline B* at the 30% value and beyond in both the domestic and international situations. This result indicates that those willing to pay 30-40% more for cleaner air travel hold reducing pollution as a high priority. These respondents likely have the means and desire to pay any reasonable price to reduce the environmental footprint. In nearly all cases, regardless of cross-reference, there is a dip in the 30-40% level of value and flare in the 50% level of value, indicating that respondents willing to pay 30-40% more for cleaner air travel were not likely to stop there. Respondents were more apt to continue to the 50% mark.

When the survey results are separated by annual income, the lowest income bracket was shown as the most linear in the domestic and international market comparisons. No one bracket can be visually identified as the steepest in the domestic market, yet the steepest results in the international market belonged to the second income bracket.

To statistically determine the influence of a respondent's annual income on his or her level of value for cleaner air travel, a linear regression was used for the domestic, and international markets. The adjusted Coefficient of Determination value for the domestic market resulted in 0.395. This indicates that income accounts for 39.5% of the shared variance with the remaining 60.5% related to factors not included in the regression analysis. For the international market, the adjusted Coefficient of Determination value result was 0.162; indicating that annual household income was likely 16.2% influential for respondent's level of value in the international market.

There is significant public interest in reducing aircraft emissions, which presents a marketing approach for airlines and aircraft manufacturers that will likely result in positive input to the industry. The annual income element is shown as having some relationship to a respondent's level of value. This result may indicate that once it is determined by a respondent that he or she can afford the price increase, the question then falls to his or her personal level of value. At a certain level of disposable income, wage levels likely fails to be of concern.

Airlines desiring to take advantage of the findings, may express this interest to aeronautical research institutions and aircraft manufacturers. Airlines and aircraft manufacturers, particularly European domestic airlines should put their financial support behind the research and development of cleaner aircraft, either internally, with aeronautical research institutions, or most preferably, jointly. Airlines who financially support research and development of cleaner aircraft should smartly market the projects they support and their environmental goals as a whole. Those who are concerned about the environment will appreciate the effort and may be attracted to the airline for it, even before any new technology is applied. The success of this direct marketing could have a positive impact on the sales of that aircraft to airlines. Should a prototype show a high level of environmental potential, airlines may even be willing to market jointly with aircraft manufacturers.

CONCLUSIONS

The results of this research has shown that the flying public of Europe and North America is willing to support the airline industry on reducing emissions. A large percentage of leisure air travelers will likely expend more of their disposable income to support the cause of reducing emissions. A secondary and perhaps more immediate finding is that airlines will likely have significant marketing success in presenting their environmental projects and goals to the public. Given the high level of public support for reduced emissions, airlines and aircraft engine manufactures can benefit from this environmental marketing even before their projects become tangible. In addition to the increased market share, airlines would also reduce the emissions produced in their daily operations, and thus make operation under the EU ETS as transparent to operations as a tax report.

The benefit to the environment notwithstanding, continual investment in aircraft efficiency provides a long-term driving force for the progress of aeronautical science. This progress will surely have secondary effects in related disciplines such as propulsion technology, wind turbines, and space flight.

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WORKPLACE BULLYING: PROJECT STRATEGY

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ABSTRACT: Bullying in the workplace is a common trend that has been reported in different types of organizations throughout the world. As noted by the Workplace Bullying Institute, 35% of the U.S. workforce (an estimated 53.5 million Americans) reported being bullied at work and 15% of the workplace complained about witnessing the event (Results of the 2010 WBI Workplace Bullying Survey, n.d.). Thus, some organizations may be indulging or experiencing corporate/institutional bullying and entrenching bullying throughout the organization. The authors present a workplace bullying framework for developing the business case to support examining the practices within organizations and determining whether there is a need to allocate resources to execute a workplace bullying program.

The business case will introduce a structure in which the senior leadership team will consider the risks as well as the benefits of implementing a strategic program. The structure includes developing an action plan for determining whether there is a need to implement a workplace bullying program to prevent and mitigate bullying practices in the workplace. The framework structure for the project includes a predefined structure reported by Stroh & Johnson (2005) and organizational tasks and organizational considerations identified by the authors. The authors support the presentation of the framework with statistical data reported by the 2009 National Business Ethics Survey and the Workplace Bullying Institute to lay the foundation for identifying the problem and determining what data need to be collected and where to find the data. The authors discuss the benefits of implementing the workplace bullying business case framework.

INTRODUCTION

Some organizations have implemented processes and procedures to ensure they have the necessary workforce to adequately meet the desired business needs and to minimize the percentage of low performing employees (Mathis & Jackson, 2008). A number of terms such as *right-sizing* or *down-sizing* are used to note the efforts by groups to ensure employee levels and business needs are compatible and that low performing employees are properly monitored (Bohlander & Snell, 2007). However, it is just as important for companies to identify and maintain employees who have been noted as high performing (Thompson, Strickland, & Gamble, 2007). If not properly motivated, acknowledged, and rewarded, these employees may move on to other organizations where their needs can be met (Mathis & Jackson, 2008).

In an effort to retain employees that may leave for better opportunities, organizations are looking not only at compensation as a means to retain employees but also intangibles. The intangibles include the work environment, quality-of-life factors as well as trusting relationships (Glendinning, 2001). In addition, the trusting relationships may also include bosses, team members and other co-workers within and outside of departments. The trusting relationships include fellow employees that are considerate, competent, and supportive of individual talents and work situations. In the alternative, the lack of trusting relationships may create situations in which some employees are confronted with workplace bullying situations (Glendinning, 2001).

In order to determine the dynamics of workplace bullying, it is important that there be a clear and definite understanding of this concept. This is first achieved by obtaining a solid definition of the term workplace bullying. "Workplace bullying is defined as a repeated, health-harming mistreatment of one or more persons (the targets) by one or more perpetrators that takes one or more of the following forms: verbal abuse, offensive conduct/behaviors (including nonverbal) which are threatening, humiliating or intimidating, and work interference — sabotage — which prevents work from getting done" ("Workplace bullying defined by the workplace bullying institute," n.d.). "Some researchers make the case that a definition of bullying should include "relational aggression," which can be social (such as gossiping or social exclusion) or direct (such as deliberately ignoring someone or informing them they're not welcome" (The Next Step in Curbing Workplace Bullying, 11/19/2010).

The Workplace bullying concept can be quite significant to an organizational entity and its effects may be varied and far reaching. Workplace bullying in organizations has been noted to impact employee turnover, employee retention, recruiting and succession planning, productivity, and physical health of employees (Glendinning, 2001). Bullying activities "squench any potential for mentoring and professional development from the ranks, so that, if and when the bully leaves, not only does he or she leave behind a damaged organization, but a leadership vacuum as well" (Glendinning, 2001, p. 24). Additionally, bullying behaviors usually cause health problems which in turn "elevates an organization's costs in health insurance premiums, and absenteeism due to stress-related illnesses" (Glendinning, 2001, p. 274).

In addition to impacts to the individual and organization, workplace bullying can also impact society financially as well as socially (Vega & Comer, 2005). Bullying can create situations that require court involvement, unemployment, and feelings of isolation and estrangement (Vega & Comer, 2005). Organizations are beginning to explore answers to the following questions: (1) Does your organization practice corporate/institutional bullying (2) Does your organization entrench bullying throughout the organization? (Gardner & Johnson, 2001). The exploration includes a decision to document a business case to support examining the practices within organizations and determining whether there is a need to allocate resources to execute a workplace bullying program (Stroh & Johnson, 2005).

It is estimated that 54 million American workers have experienced some aspect of bullying on the job as noted by Zogby International for the Workplace Bullying Institute (Deschenaux, 2007). This represents an astonishing estimated employee number of 37 percent (Deschenaux, 2007). In addition, if the number included persons who witnessed the bullying, it would grow to 71.5 million (Deschenaux, 2007). Even more surprising is that “bullied workers report that employers predominately did nothing to stop the mistreatment” (How Employers & Co-Workers Respond to Workplace Bullying, 2008).

The purpose of this paper is to present a predefined project structure for building the business case to support examining the practices within organizations and determining whether there is a need to allocate resources to support workplace bullying programs. The proposed structure is business-oriented and comprehensive in that it includes factors that enable a complete evaluation of the organization’s current state of ethical practices and policies. The structure for the project as reported by Stroh & Johnson (2005) includes identifying the problem, determining what data to collect to study the problem, finding and collecting the data, and thereafter summarizing, evaluating, and drawing conclusions. The structure of the project as reported by Stroh & Johnson (2005) is also aligned with PMI’s Project Management Body of Knowledge framework that includes “planning, executing, monitoring and controlling, and closing” (PMI Global Standard, 2004, p. 8). Identifying the problem and determining the data to collect are tasks that are executed in the planning phase. Analyzing the data, summarizing, and evaluating are activities that are implemented in the execution, and monitoring and controlling phases. Thereafter, drawing conclusions is an activity conducted in the closing phase of the project.

WORKPLACE BULLYING BUSINESS CASE FRAMEWORK

To develop an action plan for determining whether there is a need to conduct a fair investigation and protect the targeted from further bullying, organizations need to consider “carefully diagnosing the problem you were brought in to deal with and determining what data need to be collected to ensure that the problem is thoroughly investigated” (Stroh & Johnson, 2005, p. 60). “One useful way to think of the diagnosis and data collection phase of a project as five interrelated steps: (a) identifying the problem; (b) assessing the data that need to be collected to study the problem; (c) determining where to find these data; (d) deciding how to collect the data; and (e) summarizing, evaluating, and drawing conclusions from the data” (Stroh & Johnson, 2005, p. 60). See *table 1* for an *overview of the workplace bullying business case framework*.

Table 1: Workplace Bullying Business Case Framework

Project Tasks as Defined By Stroh & Johnson (2005)	Organizational Tasks	Organizational Considerations
Project Identification	Determine Root Cause of Problem	<ul style="list-style-type: none"> • Position Power Relationships (Create a Bully-Free Workplace, 2010) • Stop bullying problem from perpetuating
Data Collection	Ask questions identified in the data collection section of the paper	<ul style="list-style-type: none"> • Collect data from Human Resources • Document the current state of workplace bullying
Summary, Evaluation and Conclusion	Collect data and note response percentages to denote potential problem situations	<ul style="list-style-type: none"> • Determine how much bullying is costing the organization • Invest in workplace bullying programs • Comment on reporting systems currently in place to support bullied employees

Source(s): Stroh & Johnson, (2005) and Analyses of Data by Authors

PROBLEM IDENTIFICATION

The below statistics in *Table 2* from *How Employers & Co-Workers Respond to Workplace Bullying Labor Day 2008 Survey* (Workplace Bullying Institute, 2008) revealed that in 52.5% of the time, bullied workers reported that employers basically did nothing to stop the bullying and in 70.7% of the time retaliated against the employer who reported the infraction. The aforementioned statistics were further validated by a study conducted by the Ethics Resource Center. The 2009 National Business Ethics Survey reported that “perceived retaliation as a result of a report of misconduct rose, from 12 to 15 percent, over the two years” (Survey: Business Ethics Improved During Recession, 11/24/2009).

Table 2: Workplace Bullying Institute

Action	Percent
Conducted fair investigation and protected target from further bullying	1.7%
Conducted fair investigation with negative consequences for the bully but no safety for target	6.2%
Inadequate/unfair investigation; no consequences for bully or target	8.7%
Inadequate/unfair investigation; no consequences of bully but target was retaliated against	31%
Employer did nothing; no consequences for bully or target	12.8%
Employer did nothing; target was retaliated against but kept job	15.7%
Employer did nothing; target was retaliated against and eventually lost job	24%
Total	100.1%

Source: How Employers & Co-Workers Respond to Workplace Bullying Labor Day 2008 Survey

When conducting step 1 in the framework, *identifying the problem*, questions to consider include (a) “is the problem the client has identified the real problem, or is this problem merely a symptom of the problem that really needs to be addressed” (Stroh & Johnson, 2005, p. 60); (b) “are there aspects of the organization’s culture that will affect” (Stroh & Johnson, 2005, p. 60) the problem? Is the problem that employers are not acting upon reports of workplace bullying or is the real problem that the organizations’ cultures foster workplace bullying actions? The environment indirectly provides avenues for workplace bullying offenders to continue to perpetuate unsafe work surroundings for their targets (Vega & Comer, 2005).

Is the root cause of the problem simultaneously matching authoritative feelings with emotions of helplessness that spur individuals to engage in improper behavior (Create a Bully-Free Workplace, 2010)? Statistics from the 2008 Workplace Bully Institute noted that 73.6% of the bullies were ranked above the target by one of more levels in the organization. Additionally, the problem may continue to perpetuate because as reported by the 2007 WBI-Zogby survey “only 15% of the bullied individuals ever formally complained to their employers, only 4% filed EEO state or federal claims, and a miniscule 3% filed lawsuits against bullying employers!” (How Employers & Co-Workers Respond to Workplace Bullying, 2008, p. 2).

DATA COLLECTION

After the problem has been clearly defined, steps 2, 3 and 4 include *assessing the data that need to be collected to study the problem, determining where to find these data, and deciding how to collect the data* (Stroh & Johnson, 2005). Thus, organizations need to decide what information is needed to answer the questions

that will yield a resolution to the problem. Additionally, the organizations need to determine the information needed and sources of information as well as how to collect the data.

Listed below are some of the questions and the information that is needed to reply to those questions that will help yield whether there needs to be a program to prevent or mitigate workplace bullying.

- 1) How many of your employees have been bullied in your organization over a one year period and a five year period? (Fast, 2010)
- 2) Are employees leaving the company due to workplace bullying? If so, what is the percentage of employees over a one year period and a five year period? (Fast, 2010)
- 3) Are employees missing work due to illnesses related to workplace bullying? If so, how many are leaving during a one year period and a five year period? (Fast, 2010)
- 4) Are jobs designed in such a way that performance goals are unrealistic? (Fast, 2010)
- 5) Do you provide ethics training and leadership seminars that reinforce and remind employees to reflect on their core values? (Fast, 2010)
- 6) What are the hiring practices of candidates? More specifically, does your company use tools to hire candidates that are trustworthy and psychologically secure and confident in their abilities to execute strategies? (Fast, 2010).

One source of internal data within organizations is Human Resources. This department plays a key role in preventing and mitigating workplace bullying situations (Caponecchia & Wyatt, 2009). One of the most important factors in preventing or mitigating workplace bullying is if organizational cultures are perceived as proactively promoting a workplace free of bullying (Caponecchia & Wyatt, 2009). The human resource-related functions that are involved in establishing a workplace free of bullying include recruiting and selection, performance management, and training and learning (Caponecchia & Wyatt, 2009). When conducting recruiting and selection activities, bullies “are found to often lie about their qualifications and experience, or describe it in ambiguous terms which are misleading. Check everything in their resume thoroughly, as lying and deception can be used as the basis for disciplinary offenses” (Query & Hanley, 2010, p. 6). As performances are assessed and rewards and benefits are allocated, organizations need to be careful not to promote an employee that has achieved by manipulating or harming other employees (Salin, 2003). Performance appraisers need to also consider the performance goals that are assigned to employees (Mathis & Jackson, 2008). Organizations need to provide training and learning to human resources staff as well as all employees about what constitutes bullying behaviors and what are the consequences for engaging in the behaviors (Caponecchia & Wyatt, 2009). One source of external data is the *Workplace Bullying Institute* as identified in the article.

“Once you have a good idea of the information you need to address this issue of interest to the client and know where it might be obtained, the next step is to decide how to collect the information” (Stroh & Johnson, 2005, pp. 68-69). “Every interaction you have in the organization is an opportunity to observe and collect data” (Stroh & Johnson, 2005, p. 69). “Observing the person’s attitude about the organization for which he or she works, how the person speaks about and refers to employees, and whether “what the organization says” matches “what it actually does” can sometimes provide more useful information than you can gather from survey and interview” (Stroh & Johnson, 2005, pp. 69-70).

There are “four common ways to collect data: (a) conducting interviews, (c) performing surveys, (c) observing, and (d) reviewing existing records” (Stroh & Johnson, 2005, p. 70). Other ways of collecting data include focus groups and internal audits (Schwartz, 2001). You may want to consider multiple ways to collect data. Interviews are time consuming (Schwandt, 2001) but “one of the best and the most frequently used ways to gain information” (Stroh & Johnson, 2005, p. 70). The interviewer has the great fortune of following up and asking why individuals feel a certain way. This practice is usually not conducted during a questionnaire. Surveys can be “a very effective tool for learning about how the people in an organization feel about a variety of issues, from the way management treats employees; to whether employees receive adequate, valuable training; to whether decision making proceeds in a top-down or bottom-up manner” (Stroh & Johnson, 2005, p. 71).

Observing people conducting business operations is another way to collect data. The question that is asked when observing is “what’s going on here?” (Schwandt, 2001, p. 179). “The advantage of this technique is that people are observed (usually) in their natural setting, doing what they normally do. This is in contrast to the interview or survey, in which people report on how they feel or behave” (Stroh & Johnson, 2005, p. 73). Another form of data collection is by examining existing records. For example, the project team can examine company data on hiring and selection practices, training and learning programs and metrics collected during company exit interviews.

The next step in the diagnosis and data collection process is to determine where to obtain the information you need to determine whether there is a need to mitigate workplace bullying in the workplace (Stroh & Johnson, 2005). *Table 3* below includes not only questions and data collection methods; but also, includes sources of information.

Table 3: Data Identification and Collection

Question (Fast, 2010)	Information Needed and Sources of Information	Data Collection
How many of your employees have been bullied in your organization over a one year period and a five year period?	Bullying metrics from employees	Interviews, Observing, Reviewing Exiting Records, Internal Audits
Are employees leaving the company due to workplace bullying? If so, what is the percentage of employees over a one year period and a five year period?	Bullying metrics from employees	Interviews, Observing, Reviewing Exiting Records, Internal Audits
Are employees missing work due to illnesses related to workplace bullying? If so, how many are leaving during a one year period and a five year period?	Bullying metrics from employees	Interviews, Surveys, Reviewing Exiting Records, Internal Audits
Are jobs designed in such a way that performance goals are unrealistic?	Review of job descriptions and performance documents Discussion with human resources and managers executing performance reviews	Interviews, Surveys, Reviewing Exiting Records, Internal Audits
Do you provide ethics training and leadership seminars that reinforce and remind employees to reflect on their core values?	Review of training curriculum including training manuals Discussions with training and learning staff	Interviews, Surveys, Reviewing Exiting Records, Internal Audits
What are the hiring practices of candidates? More specifically, does your company use tools to hire candidates that are trustworthy and psychologically secure and confident in their abilities to execute strategies?	Human resource hiring processes and procedures for leadership and management positions	Interviews, Observing, Reviewing Exiting Records, Internal Audits

Source(s): Fast (2010) and Authors' Recommendations

SUMMARY, EVALUATION AND CONCLUSION

The last step in the model includes *summarizing, evaluating, and drawing conclusions* (Stroh & Johnson, 2005). Completing the data collection processes is a major milestone in developing a business case. However, “data have little value unless they are analyzed and summarized in a manner that is useful to the reader”

(Stroh & Johnson, 2005, p. 102). During this phase, the organization needs to summarize and evaluate the findings in a way that will allow for conclusions about whether to proceed forward with a workplace bullying program in the workplace. Listed below in *table 4* includes the questions and suggested responses that were identified in the data identification and collection phases. The authors suggest that if your organizations responses are 20% or greater and the responses are ‘yes’ and ‘no’ for the indicated questions then you need to consider allocating resources to invest in a workplace bullying program in order to mitigate bullying. Additionally, the overall continuous goal for all organizations is to work towards a workplace free of bullying.

Table 4: Questions and Responses for Workplace Bullying Program

Question (Fast, 2010)	Response
How many of your employees have been bullied in your organization over a one year period and a five year period?	20 % or greater
Are employees leaving the company due to workplace bullying? If so, what is the percentage of employees over a one year period and a five year period?	20% or greater
Are employees missing work due to illnesses related to workplace bullying? If so, how many are leaving during a one year period and a five year period?	20% or greater
Are jobs designed in such a way that performance goals are unrealistic?	Yes
Do you provide ethics training and leadership seminars that reinforce and remind employees to reflect on their core values?	No
Does your company use tools to hire candidates that are trustworthy and psychologically secure and confident in their abilities to execute strategies?	No

Source(s): Fast (2010) and Authors’ Suggested Responses

BENEFITS OF WORKPLACE BULLYING BUSINESS CASE FRAMEWORK

The decision to implement a workplace bullying program to prevent and mitigate bullying practices in the workplace has employee and organizational implications. “It seems clear that businesses without values are business at risk. Their reputations suffer in the marketplace, depressing stock prices and eroding consumer confidence. Recruitment of talented personnel is more difficult. Additionally, many companies now perform due diligence on companies that are

considering as partners or suppliers, and are passing on those that don't meet their ethical standards" (Driscoll & Hoffman, 2009, p. 12).

Workplace bullying programs help to reduce employee turnover, improve employee retention, enable recruiting and succession planning, increase productivity, and aids in reducing employee health concerns increases (Glendinning, 2001). "Employee morale is also higher in a company that has well-developed values and lives by them. A commitment to shared values, rather than a culture that is based on distrust of employees, encourages employees to aspire to success. A study by professors at Bentley University found that among the benefits of a value-based culture are increased awareness of ethical issues, commitment to the organization, employee integrity, willingness to communicate openly about problems, willingness to report an ethics violation to management, improved decision making, willingness to seek advice about ethical issues, and reduced unethical conduct" (Driscoll & Hoffman, 2009, p. 12).

The overall benefit of implementing the workplace bullying business case framework, as defined in this paper, is that the organization will have an action plan to determine whether there is a need to implement a workplace bullying program to prevent and mitigate bullying practices in the workplace. Some specific benefits of companies for executing the workplace bullying business case framework, as noted in this paper from data and the authors' personal assessment, include:

- considerations of what is the root cause of the workplace bullying including identifying whether the company fosters a culture of bullying that encourages "simultaneous pairing of power with feelings of inadequacy that led people to lash out" (Create a Bully-Free Workplace, 2010);
- questions for workplace bullying data collection;
- sources of workplace bullying information that needs to be collected and data collection methods; and
- evaluation of responses to questions to denote whether resources need to be allocated to invest in a workplace bullying program.

CONCLUSION

Once it has been determined that workplace bullying occurs within your organization and needs to be prevented and mitigated the senior leadership team has a "responsibility to take a systematic approach to identifying the risk of workplace bullying, assessing its likely consequences, and preventing the risk from occurring" (Caponecchia & Wyatt, 2009, p. 447). For example, "recruiting and selection is one of the key human resources functions that can be used to defray workplace bullying issues. As employees are screened and interviewed, organizations should communicate the expectations about personal behavior within the workplace" (Carden & Boyd, 2010, p. 149). This communication includes apprising potential employees that non-threatening, bullying behaviors are not tolerated in the workplace.

Organizations have an ongoing responsibility to ensure the work environment is healthy and productive and the approach needs to be considered as an ongoing project that needs to be managed. More specifically, the primary function of organizations is to manage the project by first inputting controls to prevent bullying and then to enact controls to minimize the impact of bullying and reduce negative consequences (Caponecchia & Wyatt, 2009). The initiation of these controls starts with first identifying who is ultimately responsible for administration of the controls and who should be held accountable for action and inaction. Most organizations place the responsibility on the human resources department in that many of the controls includes processes, procedures and practices that the human resources department leads, coordinates or implements (Caponecchia & Wyatt, 2009).

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THE RISE AND DEMISE OF THE COURTYARD RESTAURANT: A CASE STUDY

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ABSTRACT: This abbreviated case study challenges students to advise a potential restaurant owner as to the many factors to be considered when deciding whether to open a restaurant. Much like the entrepreneur, the vignette covers many decision areas that must be addressed by a potential proprietor, is based on an actual business developed by one of the authors, and is appropriate for undergraduates as well as students in MBA and Entrepreneurship programs. The instructor can use the case study over several weeks to stimulate discussion on at least six interesting and important concepts: (1) the single most important question that a potential restaurateur needs to answer; (2) identification of and sources of data for external factors that need to be considered; (3) identification of and sources of data for internal factors that need to be considered; (4) options available to potential restaurateurs who are eager to overcome negative connotations left by a previous unsuccessful restaurant at that location; (5) specific ways that a potential restaurateur can resurrect or immolate the successful formula used by a previous successful restaurant at that location (6) elaboration of new creative innovations that a potential restaurateur can initiate to start his new restaurant on a successful road to financial success; and (7) internal strengths & weaknesses, external opportunities and threats that need to be evaluated. Each issue in the case study is designed to be discussed in a one-hour class session, and is likely to require at least an hour of preparation by students.

BACKGROUND

There are many different management approaches that can be used in the restaurant industry and tailored specifically for size, client turnover, number of employees, etc. Using the right approach is essential for the successful operation of a restaurant. There are five schools of management thought: classical, behavioral, management science, quality management and systems. A brief overview of each follows.

The classical school stressed the important features of management and their relationships to the production process (Odgers, 2005). The Scientific Management approach came into use in the early years of the 20th century and although generally used by production processes, offers some advantages to many other industries. This approach encompassed using four objectives: 1) developing a science for each element of an employees' work, 2) training and

development of workers, 3) development of a spirit of cooperation between employees and management and lastly 4) the equal division of work between employees and management. Frederick Taylors' framework for organization included clear delineation of authority, responsibility, separation of planning from operations, incentives for workers, management by exception, and task specializations (ACCEL Team Development, 2010). In Total Entity Management, Henri Fayol stated a series of management principles by functions, planning, organizing, commanding, coordinating and controlling (Odgers, 2005).

Increasing attention to the human element in organizations is the basic premise of the behavioral school and found that workers are interested in more than just money. Elton Mayos' Hawthorne experiments found that changes in the work environment had little effect on productivity whereas productivity increased when management recognized not only the physical but the emotion welfare of employee, when reasons for management decisions were provided and when employees were made aware that management appreciated the importance of their work (Odgers, 2005). Another theory in the behavioral school was created by Abraham Maslow who showed that everyone is motivated by fulfilling a hierarchy of needs; once lower-level needs are satisfied, they are no longer motivating factors so other higher-level needs take their place. Theory X and Theory Y models were developed by Douglas McGregor and have their place within the behavioral school of thought. Theory X assumes that people have an inherent dislike of work, lack ambition and will avoid it if they can. These employees prefer to be followers rather than leaders and thus punishment, threat, or close supervision may be necessary for motivating those individuals. Theory Y, on the other hand, assumes work is a natural extension of play and rest therefore employees accept the responsibility of self-direction and self-control (ACCEL Team Development, 2010). Herzbergs' motivation-hygiene theory and Druckers' management by objectives also fall in this school of thought.

The Management Science School uses higher level mathematical and engineering skills to solve decision-making problems. Work sampling, queuing theory and forecasting are all examples of quantitative business methods used to address complex decisions. The rapid and accurate calculations of a computer provide not only high quality data but also saves time and money for a company (Cliffnotes.com, 2011). Total Quality Management, (TQM) or the Quality Management School, is a philosophy that corporations put into place for continuous improvement of all areas of the organization. Five principles used with TQM are to: 1) produce quality work the first time, 2) focus on the customer, 3) have a strategic approach to improvement, 4) improve continuously and 5) encourage mutual respect and teamwork. The main focus is on teamwork, lowering costs and increasing customer satisfaction (Cliffnotes.com, 2011). Theory Z, by William Ouchi, assumes the abilities and talents of the employee are more important than the job itself. The key to increased productivity then is to get employees engaged in developing interpersonal skills and broadening career opportunities and development (Odgers, 2005). The pioneering of statistical analysis to improve production was utilized by W. Edwards Deming

during World War II and synthesized into a lists of objectives he called “the 14 points” (Deming, 1986). In the 1960’s, the Systems School of management thought received a great deal of attention that has since faded. This school focuses on comprehending the organization as an open system that converts inputs (raw material) into outputs (products) (Barnett, 2011). A business firm is considered a total system which may have all of the following major components and others: sales and marketing, finance, production, human resources, accounting, purchasing, administrative office.

There are two additional schools of thought that are not part of the basic five usually discussed in textbooks as they are not complete management theories but rather have offer insights into the management field: the contingency school and the contemporary school. The contingency school of thought originated in the 1960’s and focuses on applying management principles and processes as determined by the distinctive characteristics of each situation. In this school, no one best way to manage exists and each situation demands that factors like external environment, technology, organizational, manager and subordinate characteristics be reviewed (Barnett, 2011). The contemporary school of thought encompasses both TQM and the learning organization. As TQM was discussed above, only the learning organization will be described here. The learning organization is one where all employees are focused on problem identification and solution. Learning organizations use a team-based structure, empowered employees and open information in order to allow an organization to learn, grow and adapt to continuing changes in the business environment (Barnett, 2011).

Another approach to this case study can be through a SWOT analysis. A SWOT analysis details strengths, weaknesses, opportunities and threats in order to measure a business unit, a proposal or and idea. This subjective analysis assists management with in understanding, discussing, presenting of facts so that decisions may be made (Humphrey, 2004).

INTRODUCTION

The restaurant industry is a most important sector of the United States economy. Restaurant sales are forecast at 580.1 billion dollars for 2010. The restaurant industry employs approximately 12.7 million workers or 9% of the U.S. workforce and is expected to add 1.3 million jobs over the next decade with employment reaching 14 million by the year 2020.

On a typical day in America in 2010 more than 130 million people will be food service patrons. Nearly half of all adults in the U. S. have worked in the restaurant industry at some point in their lives, and more than one in four adults got their first job experience in a restaurant.

Eating and drinking places employ more minority managers than any other industry. One quarter of restaurants are owned by women, 15% by Asians, 8% by Hispanics and 4% by African Americans. Eating and drinking places are commonly small businesses with 91% having fewer than 50 employees. More than seven out of ten (70%) eating and drinking establishments are single unit

operations. Restaurant industry sales are forecast to advance by 2.5% in 2010 and equal to 4% of the U. S. gross domestic product.

CASE STUDY

For nearly twenty years, the Courtyard Restaurant was a successful restaurant venture for business partners Judd Lancet and Mark Hall. They created the restaurant to fill a market niche in a growing southwestern city of 200,000. Both men had many years of restaurant ownership prior to the Courtyard. Their concept was to create an environment that would attract local professionals to an upscale restaurant for lunch and private dinner functions in the evenings.

The location for the restaurant was anchoring a small strip center located on busy Barrett Road just one block off the primary expressway through town. The center provided ample free parking and easy access. The other tenants in the center included a ladies ready-to-wear store, a jewelry store, antiques and gift shop, a flower shop, a bank and a beauty shop. The ladies ready-to-wear store and the antiques/gift shop both opened directly into the Courtyard. These two businesses especially complemented the location of the restaurant and vice versa. Restaurant customers could shop either prior to or after lunch or browse and shop while waiting for their table.

The restaurant's main dining area was two stories high, with skylights and a lush garden atmosphere. The all male wait staff wore white crisp tuxedo shirts, bow ties and black slacks. A huge antique crystal chandelier adorned the center of the dining room. Large Italian terracotta statues and oversized oil paintings decorated the room as well. Every table was draped with table cloths and cloth napkins. The fresh long stem roses in tall vases on every table were a special distinctive touch of the Courtyard. There were also singing canaries in cages in the entryway of the restaurant. Within the first year of its opening, the ambiance attracted a regular crowd of clients and the Courtyard became "the place" to have lunch and private parties.

The restaurant's seating capacity of 150 was filled daily. Reservations were necessary for a guaranteed table at lunch. There was also a line waiting at noontime for guests without reservations. On most days the Courtyard had two turns of lunch time diners.

The kitchen was overseen by Manfred Trump. Manfred had been schooled in culinary arts in Europe and took supreme pride in his kitchen and food. The menu consisted of rich creamy soups, elaborate salads with house made dressings, fancy sandwich plates and decadent desserts as well a "daily feature" that was a specialty dish not appearing on the menu. Wine, beer, tea and soft drinks were also served.

The Courtyard had a large private dining area suitable for large parties on the second level. There were also two small private dining rooms on the first level just off the main dining room. These two rooms were regularly booked for small luncheon parties. Judd and Marks' restaurant also became a "destination restaurant." Customers were drawn from a seventy-five mile greater metropolitan

area. Luncheon parties for birthdays and special occasions were a daily occurrence.

On Friday and Saturday nights, dinner parties were regularly booked to celebrate weddings, birthdays, anniversaries, christenings and other festive occasions. Judd and Mark would work closely with the party hosts to take care of every detail from special menus to flowers to special entertainment. The private parties became a mainstay of the revenue generated by the Courtyard.

The owners were in the Courtyard every day greeting their guests and taking care of every detail. Daily they were inspecting meal presentations, overseeing the efficiency of wait staff, and making certain of client satisfaction. The Courtyard's reputation was for ideal atmosphere, delicious food and phenomenal service.

Judd and Mark had enjoyed nineteen lucrative years as owners of the Courtyard when they were approached by prospective buyers. Jason Scott, who had been the head waiter for five years, and Cole Spearman, his brother-in-law, wanted to purchase the restaurant. After six months of negotiations, the Courtyard was sold to the partnership of Scott and Spearman. Judd and Mark never returned to the Courtyard, took their profits, and immediately moved to Costa Rica where they opened a bed and breakfast. Jason Scott became the manager of the restaurant and Cole Spearman, who had no restaurant experience, merely provided the financial backing and did not take an active role in the operation of the restaurant. Manfred Trump remained as the chef. The name of the restaurant was not changed and from all outward appearances the Courtyard appeared to be virtually the same to customers.

After the first year of operation, the partnership of Scott and Spearman began having problems. Jason was severed from the partnership and Cole brought in a nephew to manage the Courtyard. Problems escalated. Manfred resigned and the wait staff began experiencing heavy turnover. The quality of the food deteriorated. Customers noticed that details were not being taken care of. Dirty flower vases and two-day flower arrangements were on the table tops. Slow and inattentive service became standard. Business began declining.

Cole Spearman had entered into a three-year lease with the shopping center owner when he acquired the Courtyard from Mark and Judd. Cole began to experience serious health problems and six months prior to the end of the lease he attempted to sell the Courtyard but was unsuccessful. He finally closed the restaurant taking the name and all movable contents with him.

Mr. James Gillman, the owner of the shopping center, immediately began advertising for a new tenant. The tenant composite has changed as some of the previous tenants left the shopping center. With the establishment of several newer restaurants on the expressway near the largest shopping mall, the setting of this shopping center has been altered.

Eight months passed and Brad Bonner, a recent culinary graduate and chef, became interested in leasing the empty restaurant space. Brad, who has eighteen months experience working in three restaurants in the area, wants to

take advantage of the history of a fine restaurant having been on the premises for over twenty years. Brad also wants to rename the restaurant the “Palms.”

Since Brad has no business management experience, he has hired you as a consultant to advise him as to whether he should undertake this venture.

TEACHING NOTES

1. Week One Assignment - What is the most important question that you will first ask Brad?
2. Week Two Assignment - What external factors (i.e., political, economic, demographic, technological, social, legal, etc.) does Brad need to consider?
3. Week Three Assignment - What internal factors (i.e., functional departments and relationships, finance, marketing, etc.) does Brad need to consider?
4. Week Four Assignment - What do you think Brad Bonner can do to overcome the last three disastrous years of the Courtyard? Give detailed recommendations
5. Week Five Assignment - Describe specific ways that Brad can resurrect or immolate the successful formula that Mark and Judd had for so many years.
6. Week Six Assignment - Describe new creative innovations that Brad can initiate to start the “Palms” on a successful road to financial success.
7. Week Seven Assignment - Assuming Brad decides to go forward with the restaurant, develop a SWOT (internal strengths and weaknesses, external opportunities and threats) analysis that can help achieve his objective.

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IDENTIFYING CHARACTERISTICS AND ROLES OF OLAP IN BUSINESS DECISION SUPPORT SYSTEMS

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ABSTRACT: A decision support system (DSS), in particular, business intelligence (BI) encompasses an environment to capture, integrate, transform, and provide decision support data to end users. Within such a system, online analytical processing (OLAP) enables data from a data warehousing environment to be made available to users in a usable format, thus providing strategic information for decision making. OLAP supports business decision making and business intelligence. In contrast to data warehousing, OLAP provides the channel that connects the online user and online data. Through this channel the user is connected with the information they need to perform various analytical activities including drill down and roll up, slice and dice, and visualizing data in various ways. OLAP tools support many kinds of multidimensional data analyses such as statistical and ratio computation, aggregation, comparison, and forecasting. Interest in OLAP is increasing because it puts more powerful tools online to deliver the right kind information to the right user. This paper describes unique characteristics of OLAP, its role in DSS and BI, and value to business. Challenges and future directions will also be discussed.

INTRODUCTION

Business data is a vitally important, yet commonly unrealized asset for organizations. Throughout the years, operational data has often been collected and stored, becoming a potentially invaluable resource to business. However, operational data from transactional systems needs to be transformed into decision-support data before it can be easily used by executives for decision making. The business value in the operational data is, in a way, hidden from use until this transformation.

Decision support systems provide business intelligence and other analytics to assist in decision making at many levels with an organization (Sauter 2011). Business intelligence and analytics often become the competitive differentiators for an enterprise (Liberatore and Luo 2010, Watson and Wixom 2007). DSS and BI can also greatly enhance enterprise knowledge management and customer relationship management (Cody et al. 2002, Micu et al. 2009). Yet, businesses find significant barriers to using analytics more effectively. Wailgum suggests that the technology is available but issues involving people interfere with using analytic technology (Wailgum 2010). This position is further supported by KPMG International's estimates that businesses use as little as 20% of the resources and potential within the organization's current analytical tools

(KPMG International 2009). It can then be inferred that learning more about BI analytics holds great promise for enterprises.

The great need for business to understand more about decision support systems, business intelligence and analytic techniques is confirmed through research. MIT Sloan Management Review and the IBM Institute for Business Value recently conducted an extensive survey on analytics within organizations. The breadth of the survey is impressive as it was conducted in over 100 countries and across 30 industries. Respondents included analysts, managers and executives. A significant finding was that 38% of businesses identified the primary barrier to using BI more effectively "...as their own lack of understanding about how to use analytics" (LaValle et al. 2010). Decision support systems used primarily for business intelligence are the focus for the remainder of the paper.

Business intelligence is a broad framework that includes both data warehousing and information delivery systems enabling the hosting of decision support data and process analytics. Data warehousing stores decision-support data in specially designed architectures that differ from operational systems. A data warehouse (DW) by definition integrates data from multiple operational systems and is typically organized around a specific subject such as customer. In contrast to operational systems, the data warehouse stores historical data in summary form. Further, once the data are loaded in the data warehouse it remains stable, unlike an operational system in which data continuously changes.

The data warehousing environment provides some decision-support data within architectures such as the star schema. However, a data warehouse can be complemented by sophisticated online tools that offer intensive decision support to end users. In the online tool, data are pre-processed and delivered to end users to more rapidly support decision making, business modeling, and operations research.

THE BUSINESS INTELLIGENCE FRAMEWORK

Data scattered across various operational systems cannot be used directly for supporting effective high-level decision making. As described earlier, decision support data are integrated, subject-oriented, time-variant, and nonvolatile. The data, stored in the DW, are snapshots of the business operation at a given point in time and are not subject to direct updates from the transactions in operational systems. Therefore operational data must be integrated and transformed into decision support data before it can be used within the BI systems. To facilitate top management's view of the business the data also has to be aligned with core business subject areas, such as customer, product, and region.

Data warehousing is part of the BI framework. Decision support data are stored in a data warehouse where specially designed schema orientates the data to support further processing for decision making. Extraction, transformation, and loading (ETL) processes transform operational data to decision support data before it is stored in a data warehouse and is ready to be used by system analysts.

However, the data in a data warehouse is still not sufficient to be directly used for effective decision support. The barriers range from performance, complexity, hierarchical support and mapping from data to visualization.

Similarly, OLAP is the part of a BI framework that brings decision support data to the end user so that they may access information quickly and easily to support effective data analysis. OLAP plays a unique role by serving as the bridge between users and data. It presents data in front of the end user facilitating multidimensional hierarchical analysis (Mansmann and Scholl 2006, Mansmann and Scholl 2007, Vinnik and Mansmann 2006). As such, OLAP enables accessing, managing, analyzing, and presenting decision support data from a data warehousing environment to support business intelligence. As major components of the BI framework, both DW and OLAP are described below in greater detail.

THE ROLE OF DW IN STORING DATA

Data in a data warehousing environment cannot be used directly for effective decision making. A typical star schema in data warehouses organizes data around facts, which are the numeric data used to convey the operational performance of a business. These facts, or measures, are placed in fact tables that represent the lowest level of aggregation in data. Additionally, dimension tables provide the categories by which decision makers would like to see or categorize data for analysis. Unique identifiers for each row of the fact table are based on the categories described in the dimension tables. Used together in the fact table, as a composite primary key, they uniquely identify each row of the fact table. In this way, relationships between the fact table and the dimension tables are established.

Data warehouses store high volumes of data representing the integrated and granular historical measures. Having historical data enables time-sensitive analysis and projections to be performed. A significant amount of calculation time would be used when aggregates at any level above the lowest level in each dimension are needed. During such calculations unacceptably low performance occurs. In addition, it is cumbersome to sort out hierarchies whenever calculations along a hierarchical structure, such as drill down and roll up, are needed.

THE ROLE OF OLAP IN ACCESSING DATA

OLAP enables multidimensional analysis to be performed by the end user (Codd et al. 2003). OLAP utilizes a cube as a structure that is conceptually intuitive to business users. As the core of OLAP for business intelligence, the cube represents key concerns of business questions. Such question as “how much sales proceeds did the product generate in this year through this store for buyers in this region and with this background?” has centered its business analysis on sales proceeds. The measures of such sales proceeds are the core contents of the cube. Edges surrounding this core resemble business subject areas in the above question, such as product, time, customer, store, and region. An OLAP cube

together with its edges reflects decision makers' perceptions on business performance.

To enable quick and easy access to the business data for better analysis, mappings from data warehouses to OLAP are necessary. OLAP systems focus on objects including cubes, measures, dimensions, hierarchies, and hierarchical levels, which provide mechanisms for accessing and analyzing the data in a data warehouse. In this mapping, data flows from DW objects, such as fact and dimension tables, to OLAP objects, such as cubes, dimensions, and hierarchies, as depicted in Figure 1. The data are transformed during each flow between the objects. Through this mechanism various client tools can be applied by users to perform decision making activities.

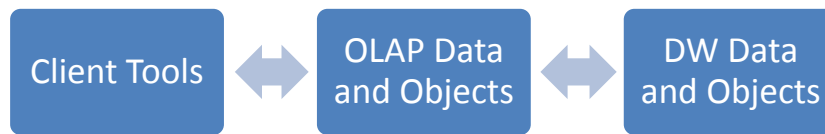


Figure 1. OLAP Maps from Client to DW

OLAP systems enable decision makers to interact with the data quickly and effectively by providing more answers than base measures in a data warehouse through its complex analytical preprocessing. It makes available preprocessed aggregates, where pre-calculated and derived data are stored in aggregate structures embedded in the cube. It provides aggregations for each level of interest along each business subject area hierarchy. This organization is supported by an OLAP engine that updates aggregated data periodically. Aggregates at all hierarchical levels along all dimensions are quickly available by joining the facts to hierarchy and level keys, greatly improving the efficiency of the system. In this way, OLAP connects clients to decision support data and maps business measurements, through OLAP cubes and measures, to numerical facts in data warehouse fact tables. It also maps business subject areas through OLAP dimensions and hierarchies to dimension tables in a data warehouse. Further, it maps business descriptive attributes through dimensions and hierarchical attributes to data warehouse dimension table attributes. Figure 2 shows objects in each environment in this mapping.

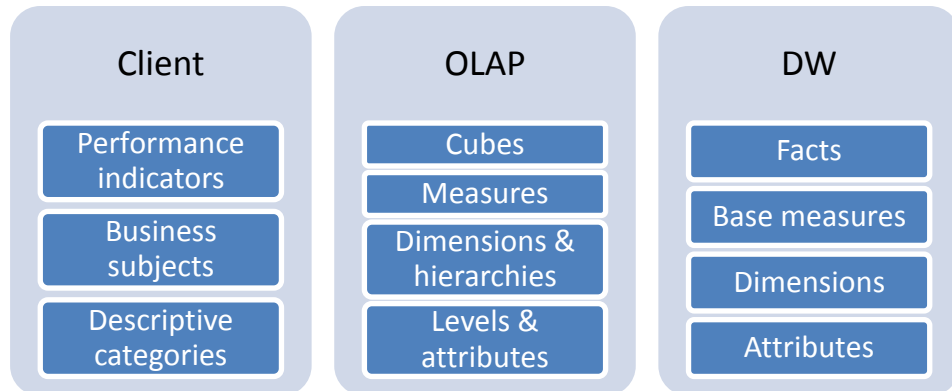


Figure 2. OLAP and DW Objects Mappings

THE ROLE OF OLAP IN MANAGING DATA

OLAP systems manage data around cubes in multidimensional databases. The cube contains measures for each unique combination of the dimension and aggregated values formed by the dimension hierarchies. A dimension may contain one or more hierarchies to assist analysis from different perspectives along the dimension, thus satisfying various needs. For example, the time dimension may have a hierarchy for calendar year and a hierarchy for fiscal year. OLAP manages relationships between cubes and dimensions, and between cubes and hierarchies, forming the edges of the cube so that analysis can be performed along either dimensions or hierarchies.

An OLAP cube contains all levels of data, from the detailed level to the top level. The lowest level of details maintained in the cube determines the lowest level of granularity of analysis that can be performed. For example, along the calendar year hierarchy in the time dimension four levels could be defined for the hierarchy from top to bottom: all years, calendar year, calendar quarter, and month. Data for each level are aggregated and stored in the cube. These aggregates at each level include the values for intersection with each level of other dimension/hierarchies defined, such as country, region, state, in the OLAP system. In this way, any time an aggregation analysis is performed, a reference to the level, or level key, will be sufficient to retrieve the previously summarized data without calculation against raw data in the underlying data warehouse.

OLAP cubes also contain both base and derived data. Base data are mappings from an underlying data warehouse such as data for sales. The derived data are analysis-specific calculated data such as “sales year-to-date” (Ytd) and “year-to-date percentage change previous year” (Ytd % Chg Pr Year), as shown in Figure 3. Therefore, a typical query does not need to perform additional calculations on the fly, since aggregations and derived values have already been calculated and stored within the cube by an OLAP engine.

Geography	Product	Time	Sales	% Chg Pr Period	% Chg Pr Year	Ytd	Ytd % Chg Pr Year
South America	Portable Music and Video	CY2007	\$1,668,735	-	-	\$1,668,735	-
North America	Portable Music and Video	CY2007	\$3,795,936	-	-	\$3,795,936	-
Oceania	Portable Music and Video	CY2007	\$11,587	-	-	\$11,587	-
Europe	Portable Music and Video	CY2007	\$2,274,220	-	-	\$2,274,220	-
Africa	Portable Music and Video	CY2007	\$647,626	-	-	\$647,626	-
Asia	Portable Music and Video	CY2007	\$6,704,484	-	-	\$6,704,484	-
South America	Portable Music and Video	CY2008	\$1,777,808	6.5	6.5	\$1,777,808	6.5
North America	Portable Music and Video	CY2008	\$4,055,191	6.8	6.8	\$4,055,191	6.8
Oceania	Portable Music and Video	CY2008	\$13,437	15.9	15.9	\$13,437	15.9
Europe	Portable Music and Video	CY2008	\$2,450,443	7.7	7.7	\$2,450,443	7.7
Africa	Portable Music and Video	CY2008	\$728,666	12.5	12.5	\$728,666	12.5
Asia	Portable Music and Video	CY2008	\$7,238,704	7.9	7.9	\$7,238,704	7.9
South America	Portable Music and Video	CY2009	\$1,978,079	11.2	11.2	\$1,978,079	11.2
North America	Portable Music and Video	CY2009	\$4,526,968	11.6	11.6	\$4,526,968	11.6
Oceania	Portable Music and Video	CY2009	\$12,134	-9.7	-9.7	\$12,134	-9.7

Figure 3. Base data and Derived Data

OLAP enables quick and easy information retrieval by managing multidimensional data in cubes and hierarchies. This provides the capability of users having online access to the data, and being able to interact with the data. Through such access decision makers can perform analysis, including slicing and dicing, drill down and roll up, with any salient data and can manipulate data in any desired way to reveal information. All of above analysis activities would not be possible if the user does not have online access to the data or information is returned in an unacceptable format.

THE ROLE OF OLAP IN ANALYZING DATA

Although the standard structured query language (SQL) for relational databases provides functions to perform basic aggregation operations, it is weak, from any perspective, in the complex calculations for needed analytics. OLAP needs to support complex calculations, complex analytical processing, and “what-if” analysis. Analytical operations are performed by an OLAP engine that prepares the derived data for storage as a value in the cube.

To support advanced analytical processing, an enhanced family of aggregate and analytic SQL functions have been introduced. OLAP support for an extensive set of analytic functions facilitates responses to complex business queries, thus making analyzing and reporting significantly easier. Some examples of advanced aggregation functions include ROLLUP, CUBE, GROUPING, GROUPING SETS, RANKING, and relative contribution functions, as listed in Table 1.

Table 1. Examples of Advanced Aggregation Functions

FUNCTION	DESCRIPTION
ROLLUP	Group the selected rows and return a single row summary for each group.
CUBE	Group the selected rows based on the values of all possible combinations and return a single row summary for each group.
GROUPING SETS	Specify multiple groupings of data and prune the unneeded aggregates.
RANK	Calculate the rank of a value in a group of values.
RATIO_TO_REPORT	Compute the ratio of a value to the sum of a set of values.

In addition, an OLAP engine extends SQL's new analytical capabilities and provides even more powerful analytic functions to perform hierarchy navigation and calculations involving ranking, time series, ratio, percentage, and the difference between time periods. The analytic functions enable decision makers to make advanced calculations for comparisons and identify trends. Sophisticated calculations are embedded within the cube to enhance the analytic process. These calculations often involve data from many rows and inter-row calculations. For example, a calculation may compare the current year's sales for each region and product category with sales from the same period in the previous year and two years prior. The OLAP cube structure is designed to accommodate this type of analysis.

Drill down and roll up analysis is performed along dimension hierarchical structures, with which decision makers analyze how a particular data value contributes to the whole. For example, if a report shows an unexpected low on the sales for a given product category, a drilldown is needed to examine the detailed numbers within that product category. OLAP systems maintain hierarchy views that encapsulate all of the hierarchical information of the dimension so queries can traverse seamlessly from any level to its parent/ancestor or children/descendants.

THE ROLE OF OLAP IN PRESENTING DATA

To answer complex analytical questions, results from OLAP data need to be presented comprehensively to the end users in meaningful and easily understood ways. At the same time, the values in the result set need to be dynamic, that is permit manipulation, to support further interaction from the users. Dashboards and scorecards are often used to summarize measures. They monitor key aspects of the organization operations showing and monitoring the health of the essential aspects of the business.

The presentation of analytics has to be flexible enough to support interactive report generation, including graphical and chart representations. To support multidimensional analysis, hypercube pivoting allows users to look at the

data in the cube from any perspective. To support hierarchical analysis, drill down and roll up allow users to retrieve information at any level along the dimension hierarchies. Multidimensional analysis enables users to focus on specific slices of the cube to perform a more detailed analysis in the operation of slice and dice.

All of above analytic result presentations are online with the data in the OLAP cube. Consequently, users obtain almost instantaneous results when they change the cube's perspective, or perform drill down to the next level along the dimension. It is generally not acceptable performance if the required chart or report is not displayed within a reasonable period of time.

OLAP supports various client tools in interactive reporting and chart generation. Further, it supports different types of users ranging from novices to power users with straightforward user interfaces, preprocessed reports, complex analysis tools, and even an advanced query capability to enhance the manipulation and analysis of information in the cubes. Other aspects of presenting data to end users include various capabilities in formatting data to enhance the clarity of a report and utilizing visualization tools with constraints to reveal important information that otherwise may not be readily obvious. Reports can be stored with customized filters and selected data ranges for future use. Moreover, OLAP provides a flexible environment for the creation of exploratory analysis report on top of the cube data.

CHALLENGES AND FUTURE DIRECTIONS

To successfully meet the needs mentioned above, OLAP faces future challenges in its design and implementation. Achieving adequate performance in processing data is always a key challenge. Business intelligence relies on decision support data that by its very nature are voluminous. Complex calculations involving high volumes of data adds a heavy burden on computational resources and may reduce acceptable performance. Therefore new approaches will be needed in the future to work efficiently with larger and larger data sets.

In addition to traditional structured data, which can be presented in a tabular format, businesses are accumulating more and more unstructured data. Unstructured data includes components such as images, video clips, and email or online chat messages. Information derived from unstructured data is becoming a critical part of business intelligence. OLAP needs to be more sophisticated in processing, analysis, and presenting unstructured data. The automated analysis of natural language for decision support systems is a young discipline. Searching graphical data, without manual tagging, is another area for growth. Users have demanded capabilities on not only presenting data from an historical perspective, but also performing mining on the data to further uncover underlying hidden knowledge for predictive analysis.

End users of OLAP systems have become more sophisticated, requiring even greater capabilities in more complex query, report, and analysis tools. To support complex operations, such as drag-and-drop and dimension pivoting with

online data, OLAP systems are becoming more and more heavily dependent on the client software typically installed at the user's location. An OLAP client application, that supports powerful graphics generation and advanced calculation, has to be installed on the client side to access an OLAP server. Heavy client-dependency creates issues in platform compatibility, easy access, and connectivity. Shifting the work to the client is likely to require more powerful hardware and in turn more expense. As the Internet becomes more prevalent in information delivery, the demand for web-enabled OLAP is increasing. In the future, delivering OLAP over the Internet will be the mainstream method of delivery for business intelligence (Wang et al. 2010). The convergence of technologies in data warehousing and the Internet thin client architecture will significantly make it easier and more convenient for users but will require further development in thin client software.

Better information delivery remains the most compelling driving force for business decision making. OLAP plays unique and increasingly important roles in business intelligence. Therefore, more attention needs to be given to OLAP, and it should be made more accessible to the end users. OLAP is critical in accessing, managing, analyzing, and presenting decision support data, which affects every aspect of delivering the right information to the right users.

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THE STUDY ON THE DIMENSION OF EXPERIENTIAL CONSUMPTION OF LUXURY BRANDS

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ABSTRACT: This study discusses the dimension of experiential consumption of luxury brand. Specifically, it examines four factors of experiential dimensions (self-gift, self-directed pleasure, congruity with internal self and quality assurance) and the impact of personal orientation on experiential dimensions as well as experiential dimensions on empathy and loyalty of luxury brand. The result illustrates that personal orientation in the luxury-brand market impacts significantly on consumer's empathy and brand loyalty according to experiential dimensions of luxury-brand.

INTRODUCTION

Today, the market of luxury brand is rapidly growing. The unprecedented growth of the luxury sector from a value of US \$ 20 billion in 1985 to its current \$ 180 billion worth has been brought. Luxury brands now play an increasingly important role in profit generation for global corporations. Historically, the value of luxury brands has been experienced many changes over time. In the past, luxury brands were the product of great craftsmen and the value of luxury brands was in the dimension of functional value (Sheth, Newman, and Gross, 1991) and then changed to social value which emphasize on the other meaning rather than product itself (Vigneron and Johnson, 1999). In the previous studies on luxury brand consumption, the motives for acquiring luxury brands were traditionally regarded as 'buying to impress others'. A review of the literature shows that social orientation dominates luxury-related research, while personal orientation is comparatively overlooked. Overall, there is lack of a rigorously examined empirical model, which aims at specifying the antecedents and consequences of personal orientation towards luxury-brand consumption. Therefore, this study aims to first demonstrate the necessity of taking an importance on changes in perspective of the dimension of experiential consumption of luxury-brand in exploring the topic of luxury-brand marketing management second, analyze difference of effect in empathy and brand loyalty on luxury-brand as consumers with personal orientation experience the dimension of experiential value and finally provide strategic recommendations for enhancing luxury-brand consumption value for those consumers.

LITERATURE REVIEW AND HYPOTHESES

Personal orientation and Experiential dimension of luxury-brand:

The definition of luxury brand traditionally relate to high price, high quality, prestige (Dubois and Czellar 2005; Eastman et al., 1999; Vigneron and Johnson 1999; 2004). Previous researches limited in researches that focused on

demographics of consumers who bought luxury brand, and concentrated on symbolic value of luxury brand through sociocultural approach related to usage of luxury brand. The research scope of luxury-brand marketing management is expanding to cover consumers whose purchase motives are more personal than social in nature. Wong and Ahuvia (1998) theorized that orientation towards luxury-brand consumption is more visible in some consumers who are intent on deriving self-directed hedonic experience from the use of the product, pursuing private meanings in the product and judging the product with individual-based standards.

Personal orientation and Self-directed pleasure: Self-directed pleasure features the feelings of bliss, contentment, and ecstasy for the self, which is contrasted to other-directed pleasure. Csikszentmihaly (1990) emphasized it as an essential element that individuals perceive in forming their own hedonic experience, which is spontaneous and intense, yet self-determined. Vigneron and Johnson (1999) asserted that consumers with stronger personal orientation may seek self-directed pleasure from luxury-brand products. Self-directed pleasure is not occurring by external factor rather than occurring through internal experience of consumer. Thus, this can be seen as a positive emotion such as self-satisfaction and pleasure by owning luxury-brand products. And self-directed pleasure with strong individual dimension will increase personal orientation on luxury-brand which is the propensity to consumption that mainly focuses on individual.

H1. The higher personal orientation on luxury brand is, the more self-directed pleasure will be.

Personal orientation and Self-gift giving: Self-gift giving had conceptualized as a form of self-communication, leaving a negative affective state (Mick and Demos, 1990). Luomala (2002) found that when facing bad-mood circumstances, consumers may resort to the acquisition of luxuries to alleviate negative mood or buy luxuries in order to elicit better feelings. From O'Cass and Frost (2002) research, 'by the self for the self' indicate that the personal orientation is the major motivation of luxury brand consumption. Consumers who buy luxury brand as a gift aimed to provide to self itself have other reason rather than buying to impress to others. These evidences demonstrate that self-gift giving can be an antecedent of personal orientation towards luxury-brand consumption.

H2. The higher personal orientation on luxury brand is, the more self-giving will be.

Personal orientation and Congruity with internal self: Consumers prefer brand which is congruent with their internal self image or personality (Aaker, 1999). The results of Puntoni (2001) research indicate that some consumers, who are more private-conscious and stronger in personally oriented disposition will buy a luxury-brand product primarily due to the congruity between their internal self and the image of the product. Above all, the actual ego that consumers pursue is internal self rather than external self and in many past researches; congruity between internal self and luxury brand is regarded as an important factor in a decision of luxury-brand consumption. Therefore people pursue congruity between luxury-brand and their ego based on personal

orientation rather than context of symbolic consumption through social orientation. This leads us to proposed following hypotheses.

H3. The higher personal orientation on luxury brand is, the more congruity with internal self will be.

Personal orientation and Quality assurance: Consumers usually look at the prestige and premium price of luxuries in inferring that they have higher level of quality than that of non-luxuries. Vigneron and Johnson (1999) defined this as a value that seeks to excellent quality of luxury brand by possessing exquisite process and superior quality. Consumers who prefer luxury brand perceived that luxury brands have superior characteristics than non-luxury brand products (Vigneron and Johnson, 2004). It was found that one reason consumers buy luxury brands is because of the superior quality reflected in the brand name (Gentry et al., 2001). From those results, quality assurance can be seen as antecedents of personal orientation in luxury brands. Consumers with the value of personal orientation on luxury brand consumption might have assurance based on level and value about the quality of luxury brand product.

H4. The higher personal orientation on luxury brand is, the more quality assurance will be.

Experiential dimension of luxury-brand and Empathy: Brand attachment has been defined as an emotion that consumers sense of closeness in the brand which normally experienced by other people. However, empathy is a state of experiencing stronger solidarity in the brand than a degree of brand attachment that experienced in those brands. Thus, it is a phenomenon of believing that the brand heals one's own wound and saying that they had experienced the growing of life through the brand and regarding the brand as an alter ego." It parallels the empathy that people experience private world of others as their own which defined by Rogers (1961). Consumers may feel empathy on luxury brand through this self consistency by buying luxury brand that resembles them. Likewise, as the experiential dimension on luxury-brand which focused on one's own internal experience increases, the brand personality and one's own identity become the one or coincide.

H5. The higher self-directed pleasure on luxury brand is, the more empathy will be.

H6. The higher self-gift giving on luxury brand is, the more empathy will be.

H7. The higher congruity with internal self on luxury brand is, the more empathy will be.

H8. The higher quality assurance on luxury brand is, the more empathy will be.

Experiential dimension of luxury-brand and Brand loyalty: Brand loyalty was defined as a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future (Oliver, 1999). In behavior approach of loyalty, it defined as a commitment on unique value of specific brand and it increases in a mood of positive feeling or emotional state (Chaudhuri and Holbrook, 2001). All this characteristics of brand loyalty relate to motivation of increase in four experiential dimensions of luxury brand consumption which has pointed out above. Therefore, consumers who have a high level of four experiential dimensions of luxury brand consumption also likely to increase

brand loyalty on luxury brand thus, this reasoning leads us to propose following hypotheses.

- H9. The higher self-directed pleasure on luxury brand is, the more brand loyalty will be.
- H10. The higher self-gift giving on luxury brand is, the more brand loyalty will be.
- H11. The higher congruity with internal self on luxury brand is, the more brand loyalty will be.
- H12. The higher quality assurance on luxury brand is, the more brand loyalty will be.

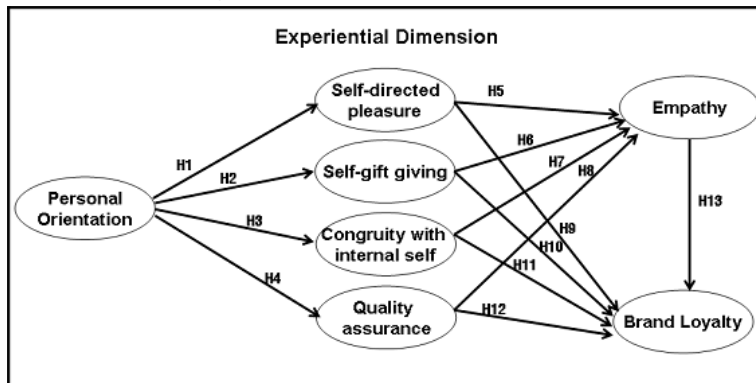
Empathy and brand loyalty on luxury brand: When consumers are obsessed about specific luxury-brand by believing that brand as alter ego, it is aimed to provide being different to them through the brand and these obsession on the brand can be regarded as behavior loyalty that defines loyalty in psychology perspective (Chaudhuri and Holbrook, 2001). Behavior loyalty as influenced by repeated episodes of positive affect toward the brand. As consumers feel empathy on luxury-brand, they have emotional connectedness which may not feel from other luxury-brand and they will have closer connection with the brand.

- H13. The higher empathy on luxury brand is, the more brand loyalty will be.

METHODS

Research Model: Research model indicates that the relationship between personal orientation and four experiential dimension. It suggests that consumers with strong personal orientation will increase the level of experiential dimension on luxury brand, and as those experiential dimension increases, the level of empathy and brand loyalty will be increase.

Figure 1. RESEARCH MODEL



Operational Definition: To measure the research model, existing and tested measures were used. Based on the explanation on personal values of luxury brand in the researches (Wong and Ahuvia, 1998; Wiedmann etc., 2007),

the characteristic of personal orientation described as it considered judging by her or his own value as important and apply it to the luxury brand on the evidence of the research of Tsai (2005) which defined it as highly dependent on self-concept. The questionnaire items were rated on a 7 point Likert scale (1=strongly disagree, 7=strongly agree).

RESULTS

Sample: A survey was conducted on university students or consumers whose ages are from 20 to 40 and live in Pusan. For sample, we chose convenience sampling method and the totals of 248 questionnaires were used for analysis except for responses that said they had no experience of luxury brand consumption and have response error.

Confirmatory Analysis and Correlation analysis: To verify reliability and validity of each questionnaire items, verification of reliability and confirmatory analysis was conducted. After confirming Chronbach α , this entire are above .8, thus it confirmed internal consistency, and reliability and convergent validity as construct reliability and variance extraction all fall within the satisfactory range. Then, confirmatory factor analysis was used. As the result, the value ($X^2/d.f.=271.54/149$) of $X^2=271.54(p=0.00)$, X^2 divided by degree of freedom was found to yield 1.822, GFI=0.90, CFI=0.95, NFI=0.91, AGFI=0.86, RMR=0.050, RMSEA=0.058. Overall goodness of fit index of the measurement model yields a satisfactory goodness of fit statistic. Next, the validity assessment through correlation analysis among the variables produced results (Table 2).

In a correlation among the constructs, the relationship between each factor resulted same direction as proposed in the hypotheses, and all coefficient are not produced extremely high relationship (above 0.9), thus discriminate validity are satisfied.

Results of the Hypotheses: To examine research hypotheses, we run a structural equation modeling analysis. Goodness of fit on structural model which illustrates structural relationship of a construct in the research model resulted as the value ($X^2/d.f.=354.52/157$) of $X^2=354.52(p=0.00)$, X^2 divided by degree of freedom was found to yield 2.258, GFI=0.87, CFI=0.95, NFI=0.88, AGFI=0.83, RMR=0.10, RMSEA=0.0. Therefore, overall goodness of fit index of the structural model falls within the satisfactory range and from the result of the hypotheses, all the hypotheses are supported.

DISCUSSION AND IMPLICATION

As a result of analysis, all the hypotheses proposed were supported and based on the result, several strategic implications can be suggested for both academics and practitioners of luxury brand marketing management. First, this study explored luxury-brand consumption behavior by focusing on consumer behavior and psychology rather than luxury-brand product itself. Second, it emphasized the importance a need for analyzing the dimension of experiential value in luxury-brand consumption. Ultimately, it indicates that luxury brand marketers should consider consumer segments with strong personal orientation on luxury brand as a target market in segmenting luxury brand market. Although as we have seen there are some implications for managerial practice, there is

significant scope for improvement. In the process of sampling method, we excluded consumers who said that they do not have experience of luxury-brand consumption so the majority of respondents were women. Future research can be conducted by having gender as a control variable of luxury-brand consumption and perception of experiential value. For the selection of luxury brand product category, luxury brands used in the survey was chosen by famous fashion luxury brands. However, there were differences on the criteria of luxury brand according to respondents but it can be expanded to demonstrate various types of differences by adopting well established criteria of luxury-brand. In sum, luxury brand marketers have to consider individual differences related to luxury values with certain situations. By knowing these differences, they may design appropriate marketing strategies.

Table 1. Confirmatory Factor Analysis

Construct	Indicator	Standardized factor loading	Standard deviation	t-value	Cronbach α	AVE	CR
Personal orientation	X1	0.81	0.34	14.49	0.849	0.663	0.854
	X2	0.75	0.44	12.57			
	X3	0.87	0.24	17.03			
Self-directed pleasure	Y1	0.82	0.32	14.81	0.785	0.565	0.791
	Y2	0.57	0.68	8.89			
	Y3	0.84	0.29	14.91			
Self-gift giving	Y4	0.86	0.26	16.47	0.913	0.779	0.913
	Y5	0.91	0.17	18.16			
	Y6	0.88	0.23	16.90			
Congruity with internal self	Y7	0.86	0.26	14.50	0.846	0.741	0.851
	Y8	0.86	0.26	14.36			
Quality assurance	Y9	0.58	0.66	8.97	0.749	0.518	0.760
	Y10	0.81	0.34	13.51			
	Y11	0.75	0.44	12.01			
Empathy	Y12	0.70	0.44	13.40	0.863	0.694	0.871
	Y13	0.87	0.14	18.28			
	Y14	0.75	0.35	14.76			
Brand Loyalty	Y15	0.79	0.31	15.46	0.844	0.655	0.850
	Y16	0.67	0.51	12.09			
	Y17	0.84	0.22	16.29			
Chi-Square = 271.54(P=0.00), DF = 149, GFI = 0.90, CFI = 0.95, NFI = 0.91, AGFI = 0.86, RMR = 0.050, RMSEA = 0.058							

Table 2. Correlation Analysis

	X1	X2	X3	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	
X1	1																				
X2	.58**	1																			
X3	.73**	.64**	1																		
Y1	.46**	.49**	.52**	1																	
Y2	.25**	.25**	.31**	.44**	1																
Y3	.43**	.45**	.53**	.68**	.51**	1															
Y4	.04	.17**	.04	.20**	.11	.24**	1														
Y5	.06	.17**	.02	.23**	.12	.21**	.78**	1													
Y6	.08	.17**	.07	.22**	.07	.25**	.75**	.79**	1												
Y7	.11	.29**	.07	.18**	.04	.19**	.33**	.38**	.31**	1											
Y8	.12*	.29**	.13*	.29**	.04	.27**	.29**	.37**	.34**	.73**	1										
Y9	.15*	.13*	.08	.20**	.12*	.17**	.11	.09	.13*	.07	.14*	1									
Y10	.21**	.19**	.14*	.17**	.01	.12*	.11	.06	.10	.24**	.22**	.46**	1								
Y11	.13*	.09	.05	.13*	.10	.15*	.10	.06	.03	.19**	.15*	.43**	.61**	1							
Y12	.15*	.19**	.10	.25**	.13*	.29**	.33**	.31**	.29**	.36**	.33**	.36**	.40**	.42**	1						
Y13	.15*	.23**	.09	.31**	.14*	.29**	.38**	.40**	.37**	.45**	.45**	.23**	.35**	.34**	.70**	1					
Y14	.21**	.22**	.18**	.25**	.25**	.32**	.36**	.35**	.26**	.43**	.39**	.20**	.34**	.36**	.57**	.75**	1				
Y15	.15*	.15*	.05	.36**	.13*	.25**	.24**	.30**	.26**	.33**	.34**	.40**	.42**	.40**	.46**	.47**	.34**	1			
Y16	.09	.10	.03	.20**	.11	.21**	.19**	.24**	.24**	.28**	.31**	.33**	.37**	.30**	.27**	.33**	.27**	.58**	1		
Y17	.30**	.24**	.15*	.39**	.19**	.30**	.29**	.35**	.29**	.35**	.37**	.30**	.39**	.29**	.40**	.54**	.46**	.73**	.63**	1	

Table 3. Results of the Hypotheses

H	Path	Path Coefficient	T-value	Accept/Reject
H1	Personal Orientation → Self-directed pleasure	0.71	9.78	Accept
H2	Personal Orientation → Self-gift giving	0.15	2.17	Accept
H3	Personal Orientation → Congruity with internal self	0.24	3.27	Accept
H4	Personal Orientation → Quality assurance	0.23	2.87	Accept
H5	Self-directed pleasure → Empathy	0.14	2.25	Accept
H6	Self-gift giving → Empathy	0.29	4.76	Accept
H7	Congruity with internal self → Empathy	0.36	5.27	Accept
H8	Quality assurance → Empathy	0.40	5.17	Accept
H9	Self-directed pleasure → Brand Loyalty	0.17	2.71	Accept
H10	Self-gift giving → Brand Loyalty	0.15	2.38	Accept
H11	Congruity with internal self → Brand Loyalty	0.16	2.33	Accept
H12	Quality assurance → Brand Loyalty	0.40	4.62	Accept
H13	Empathy → Brand Loyalty	0.22	2.46	Accept

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